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MOLD MAGAZINE

MOLD MAGAZINE ISSUE 02

# MOLD

## The Future of Food

2

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PRETZIADA
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# MOLD

# ISSUE 02: A SEAT AT THE TABLE

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EDITOR'S NOTE

Anyone who has enjoyed a meal with a toddler has experienced the joy of watching someone discover the pleasures of food. At 16 months, my godson finally grew a significant set of tiny baby teeth and it was incredible to watch him navigate the shape, texture and flavors of different foods while simultaneously deciding whether to employ a utensil, his tiny fingers, or, more often than not, a combination of the two.

The question of how design might be able to cultivate this sense of engagement and exploration in our relationship with food —for children and adults—is the challenge for Issue 02. More specifically, we are interested in how the design of tableware and dining furniture can be employed in crafting new rituals around dining. Dining, after all, is not just eating. It's social, cultural, personal, emotional and political. It's also multisensory—eating is the only thing we do, besides sex, that engages all of our senses.

With the editors of the online design magazine Sight Unseen, Issue 02 celebrates the beauty and innovation of iconic dining objects and furniture through the lens of a global set of independent designers working to create future icons. The designer/chef duo of Michel/Fabian offer two perspectives on designing utensils for the senses with respect to history and gesture. And this same respect for culinary tradition informed our choice to commission work from designers representing Brazil, Sardinia, South Africa, Togo and Vietnam to imagine new dining tools for eating insects.

Technology will have a powerful hand to play in considering future dining rituals. Pioneering food designer Martí Guixé reflects on 20 years of food design and the potential of digital foods, while Emilie Baltz argues that food itself is the connected device for our modern world. Devices might also mediate our dining experiences: in virtual reality, autonomous vehicles or as wearable algae farms.

Dining rituals are the most fundamental of performances and in this issue we note the rise of performance design in service to the design of new objects. For the citizens of war-torn Sarajevo, improvisational design and food rituals were a matter of life and death, but also purpose and celebration. And as our population rapidly ages, dining rituals and technology come together to offer solutions that bring people together to provide joy and nourishment.

For too long, design was limited to interior objects and defined by furniture, lighting and industry. How might these traditional objects of design be employed for the urgent purpose of how we feed 9 billion people by the year 2050? Undoubtedly, the answer lies in embracing new foods and new typologies to address the food crisis. With the diversification of the kitchen pantry, design will be employed to bridge the divide between the table and mouth, craft rituals for celebrating the food itself, and offer products that engage all of the senses.

Cheers! Salud! Ganbei!
LinYee and Johnny

# Icons of The Table

TEXT BY TIFFANY LAMBERT

# Modern Dining Design

C.1878 TOAST RACK —
CHRISTOPHER DRESSER

Designed a full four decades before the influential Modernist program at the Bauhaus, the British designer Christopher Dresser created pared down, sparse, geometric objects that were quite radical for their time. But unlike many of his contemporaries who embraced craftsmanship and abhorred industry, Dresser's silver-plated metalwork are among the earliest celebrations of an industrial aesthetic meant for manufacture, as evidenced by the simple elements with exposed rivets. After a trip to Japan in 1877, Dresser denounced decoration in favor of more sober forms.

C.1910 WIENER WERKSTÄTTE
TEA SERVICE —
JOSEF HOFFMANN

A collaborative association between the public, designers and craftsmen, the Wiener Werkstätte celebrated craft through industrial production. Founded by Josef Hoffmann, Koloman Moser, and Fritz Wärndorfer in 1903 in Vienna, the Wiener Werkstätte placed emphasis on quality, including lavish materials such as hand-formed silver, semiprecious stones and ebony. This tea set illustrates the synthesis of all aspects of a design, from the decorative to the structural components, and symbolizes how the Viennese avant-garde sought out a utopic vision for a total work of art, or *gesamtkunstwerk*, in their domestic objects.

1926 FRANKFURT KITCHEN —
MARGARETE "GRETE"
SCHÜTTE-LIHOTZKY

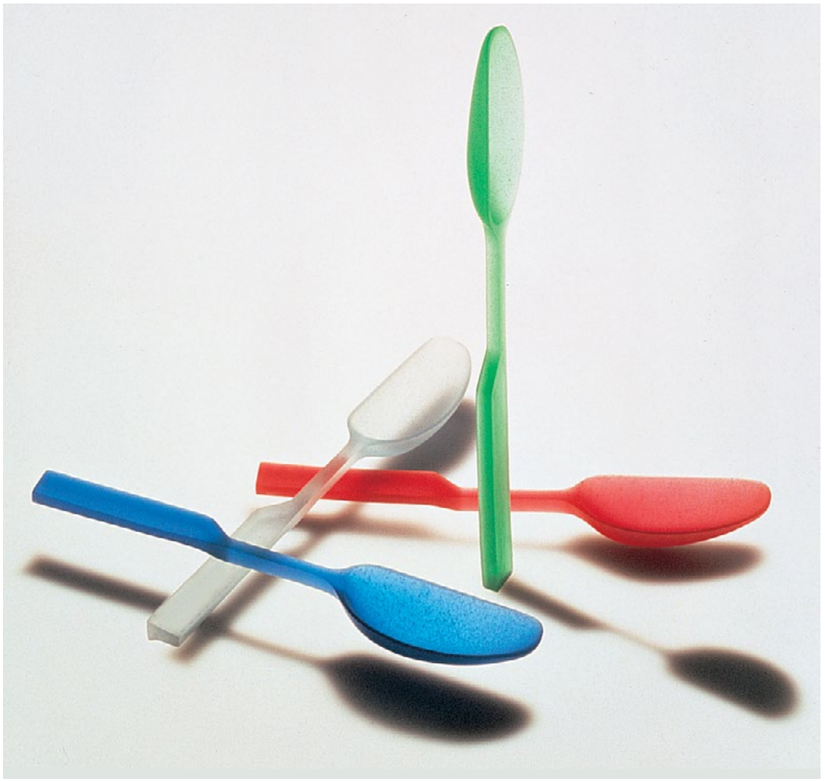
In the first quarter of the 20th century, there were turbulent debates about women and their role in society. The design of kitchens became a place for this debate to play out in the pursuit of greater efficiencies and domestic hygiene. Grete Schütte-Lihotzky's *Frankfurt Kitchen* was a low-cost solution for municipal housing built in the late 1920s in Frankfurt, Germany. With approximately 10,000 units produced, *Kitchen* was an early step toward creating a more egalitarian world, and an early work by a female architect.

C.1936 OBJECT (LE DÉJEUNER EN FOURRURE) —
MERET OPPENHEIM

Inspired by a conversation while dining with Pablo Picasso and Dora Maar at a Parisian cafe in 1936, Swiss artist Meret Oppenheim created her famous Surrealist piece, known in English as *Breakfast in Fur*, when she was just 23 years old. Her fur-lined teacup, saucer and spoon instantly became an icon— the Museum of Modern Art in New York quickly acquired it — transforming a stereotypically feminine object into sexually charged tableware. Oppenheim went on to be productive in jewelry, furniture, costumes and poetry in an oeuvre that eschewed the Modernist need for unity, instead embracing a constantly evolving methodology in her artistic practice.

C. 1960 SERVING CART
FROM THE
FOUR SEASONS —
GARTH
AND ADA LOUISE
HUXTABLE

Generations of powerful clientele wined and dined at the Four Seasons restaurant, which opened in 1959 through a design partnership between architects Mies van der Rohe and Philip Johnson. The storied modernist vessel was known to regulars for its rosewood bar designed by Johnson, large-scale brass rod sculpture by the artist Richard Lippold, banquets and furniture by Knoll, and bar cart and glasses designed by Garth and Ada Louise Huxtable, the first full-time architecture critic of *The New York Times*.



1962 SLEEK SPOON FOR JARS —
ACHILLE AND PIER GIACOMO CASTIGLIONI

Originally created for Kraft Foods in 1962, Italian design titans Achille and Pier Giacomo Castiglioni's Sleek spoon for jars embodies their whimsical, playful approach to functional, everyday objects. Sold by Alessi since 1996, the design was developed by casting the inside of a standard mayonnaise jar to determine the exact curvature for the spoon to remove every last amount of a condiment.

1968 SPOON STRAW —
ARTHUR A. AYKANIAN

Part drinking straw, part spoon, Arthur A. Aykanian's striped spoon straw is an innovative rethinking of two useful objects and an exploration in plastic. Developments of injected molded polymers in the 1960s paved the way for a less rigid, more reliable material. Since then, designers have experimented with plastics to transform the built world. The disposable spoon straw is generally associated with Slurpees.

1958 PEG BOARD
FROM JULIA CHILD'S
KITCHEN

By introducing French cuisine to an American audience, the chef and television personality Julia Child was the leader in a gourmet revolution. Not only did Child create the bible of French cookbooks, she brought stylish organization in the form of her now iconic pegboard: painted blue and adorned with 30 French copper pots, with a mapping system for every item. The entire kitchen of the maven of American cookery's Cambridge, Massachusetts home was donated to the Smithsonian's National Museum of American History.

1973 CIBI WHISKEY GLASSES —
CINI BOERI

For many years, Cini Boeri has been a leading figure of Italian design, but she also contributed to the seminal Postmodern sci-fi film *Blade Runner*, where her *CiBi* whiskey glasses were featured prominently. Handmade and mouth-blown by Arnolfo Di Cambio in Italy since 1973, the glass was selected by director Ridley Scott and reappears in the 2017 adaptation of the film, *Blade Runner 2049*.

1968 9093 TEA KETTLE FOR ALESSI — MICHAEL GRAVES

After finishing school, Michael Graves worked in George Nelson's office from 1959-60 where he learned about the work of Alexander Girard. Girard, best known for his colorful textile designs for Knoll, was likely to be an early inspiration for Graves' own interest in color. In his *Whistling Bird* tea kettle for Alessi, Graves uses red to signify the heat of the steam whistle while the blue handle relays that it is cool to the touch. Historically Alessi's best selling product of all time, the kettle symbolizes the Postmodern notion that, beyond functionalism and formal considerations, objects can be poetic.

1988 TABLE FROM *BEETLEJUICE*

Cinema and design have long held a dynamic relationship. *Beetlejuice*, a haunted house comedy from 1988, had an aesthetic all of its own that might be described as matter-of-fact Surrealism. A pair of ghosts—a recently deceased young couple—haunt their former home in an attempt to scare away the new tenants. The characters of the living inhabitants mesh with the set designs. Particularly memorable is the granite slab dining table, which evokes a deadpan sense of otherworldly derangement.

1990 SALAD SUNRISE OIL AND VINEGAR BOTTLE FOR DROOG DESIGN — ARNOUT VISSER

Conceptual Dutch design of the 1990s and early 2000s used irony as a device, often with a sparing use of resources, recycled materials and a deliberate, makeshift lack of style. Taking advantage of the natural properties of the oil and vinegar used to make a salad dressing, Arnout Visser worked in this conceptual style letting the liquids drive the overall aesthetic and form—oil naturally rises to the top, creating a distinct visual separation between the two.

1990

JUICY SALIF
LEMON SQUEEZER FOR
ALESSI —
PHILIPPE STARCK

The epitome of the art object, French designer Philippe Starck's work of the 1990s emphasizes form over function and a predilection for a biomorphic aesthetic. Starck's *Juicy Salif* highlights narrative more than considerations of use: it is the object's sculptural quality that stands out.

2016 PORCELAIN EGG CUP
FOR *THE THING QUARTERLY* —
RICKY SWALLOW

Egg cups as a typology have existed since before Pompeii was buried under the ash of Mount Vesuvius. Since then, they have been made in a variety of materials—silver, ceramic, wood, glass, melamine—and styles. Martha Stewart has a vast collection of them (collecting egg cups is termed pocillovy) and in 2016, the Australian sculptor Ricky Swallow created one for *The Thing Quarterly*. Based on a peg designed by the Shakers, Swallow used ordinary materials such as cardboard and glue to interpret the domestic form.



If we're being totally honest, our idea to create a timeline of iconic dining objects for this issue didn't initially spring from any grand pedagogic ambition to illustrate the history of design through the lens of one of humankind's most universal rituals. It sprung, rather, from a chance late-night encounter with a particularly nostalgic bit of pop culture: the *Beetlejuice* dinner party scene. Strange as it may seem, it was rediscovering that scene — with its amazing granite-slab table, ROLU-esque animal-pelt dining chairs, and Memphis-style shrimp bowls — that eventually made us think about what other great dining-related moments and designs have made their mark on history, from Meret Oppenheim's conceptual fur teacup to one of the most recognizable (if useless) lemon squeezers of all time.

This list was driven by the idea that the most iconic objects aren't necessarily the most functional or intellectual ones — they're the ones that are ultimately the most memorable.

— SIGHT UNSEEN

IMAGE CREDITS

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JULIA CHILD PEGBOARD — Schlesinger Library, Radcliffe Institute, Harvard University
CIBI OLD FASHIONED GLASSES — Arnolfo di Cambio
9093 KETTLE MICHAEL GRAVES — Alessi
DROOG SALAD SUNRISE — Arnout Visser
JUICY SALIF — Alessi
RICKY SWALLOW EGG CUP — *The Thing Quarterly*

# Knife, Fork, Spoon, Hand

TEXT BY ANDREAS FABIAN & CHARLES MICHEL
PHOTOS BY KRISTY NOBLE, STYLING BY OLIVIA BENNET

Licking, sucking, touching, slurping. When did the explicit enjoyment of food become a guilty pleasure; a naughty, rude act? Aren't the pleasures of food some of the most important of human experiences, contributing both to our physical and psychological wellness? We can't deny that some of the most delicious food experiences often come from sucking fingers, eating with our bare hands, or licking a cone or even the plate. Social etiquette and table manners, mediated by the utensils we use to interact with food (cutlery and plateware), appear to be taking us away from certain pleasures of eating instead of getting us closer to them.

Andreas Fabian and Charles Michel met through the Crossmodal Research Laboratory at the experimental psychology department of Oxford University. When Fabian asked Michel, "What is the best compliment you've ever had for your cooking?" he responded, "When people lick the plate!" Ideas immediately connected and they started creating a series of intuitive eating utensils such as a "Licking plate," "Hand Bowl," and "Goûte spoon," that a year later, were exhibited at the Science Museum in London in an exhibition on *Cravings*.

Their collaboration aims to remedy the modern-day disconnection to our senses (and food) through the design of unconventional cutlery and plateware. By proposing an alternative for modern tables, touching and even licking food could be made an elegant act. Integrating a tool as part of the sensual experience of food can implicitly heighten our awareness of the beauty of eating, hopefully taking the diner closer to food and its pleasures, rather than away from it.

In this article, the authors will explain the rationale behind their approach to food experience design through innovative eating utensils —Fabian from the angle of design and philosophy, and Michel from multisensory perception and culinary art.

## THE TASTE OF CUTLERY, Charles Michel

*'Optimal design will increasingly come from reverse engineering the processes of the mind' (Spence & Gallace, 2014)*

Let's begin with a bold statement: The best recipes don't make the most delicious experiences.

In the last decade, a field of scientific research coined *gastrophysics*, a blend of experimental psychology and cognitive science, has provided evidence that the pleasures of eating are not just about the physical and molecular properties of food or drink. It can be said that flavor is a perception (not a sensation) created in our brains (not in our mouths), informed by the integration of information coming from all our senses. Vision, touch, olfaction, audition and, of course, taste, all play a role in modulating our experience of foods. Eating might be the most multisensory experiences a human can live, yet, when designing foods, we mostly think of what happens in the mouth: texture, aromatic complexity, taste balance, temperature. While these aspects play a fundamental role, the "everything else," such as expectations, atmosphere and social conventions, model our experiences much more than we imagine.

Amidst the complexity of food experience, when it comes to designing flavor, there is one approach that is rarely acknowledged and probably from which there is most to gain in terms of quality of ritual, purpose and enjoyment: the tools we use to contain and bring food to the mouth. Indeed, cutlery impacts our enjoyment much more deeply than we think, and its influence is broad, affecting taste perception, value perception, attention and the way we engage with the food.

The "drop"-shaped Goûte spoon by Michel/Fabian was designed for eating creamy foods: it aims at creating a pleasurable experience in the hand and lips, and emulate the sensation of licking one's fingers.

For example, in an experiment we conducted in 2015, we served diners at a large dinner the same food, but half of them with banquet cutlery, and the others canteen cutlery. Unaware of the manipulation, we asked diners to rate how flavorful they found the food, how beautifully presented and plated they thought it was, and how much they would pay for it. Surprisingly, ratings were significantly higher from customers given the banquet cutlery. People were willing to pay 15% more for their food, found it to be more delicious, and found the presentation more beautiful.

But why? The shape and overall design of the two different cutlery sets were very similar. The weight of the banquet cutlery, however, was three times heavier than the cheaper counterpart.

This experiment, published in *Flavour Journal* together with Professor Charles Spence and Carlos Velasco, is just one example of the dramatic changes that cutlery can affect on the eating experience, or may we say, on the flavor of food. Other research from Spence's Crossmodal Research Laboratory at the University of Oxford has shown that the color of the cutlery can affect how sweet or salty food is perceived to be. The same goes for plate color. Plate size has been shown to change how much we eat, and how holding a plate in your hand can change how fast and how much you end up eating.

Despite this evidence, food designers at large seem mostly concerned about products, recipes and the art of cooking—which is a noble endeavor—but fail to acknowledge the complexity of eating psychology, and the importance of the "everything else." Thinking about cutlery to enhance pleasure, guide healthier consumption, and even model the emotional content of eating, is probably one of the most effective ways to make diners engage in different ways—whether that's via changing the social dynamics at the table, or implicitly guiding them towards a more attentive consumption behavior.

We should also remember that many humans today eat with their bare hands. Yet restaurants and canteens—key spaces that shape our everyday well-being—impose cumbersome lumps of metal that hundreds of people may have put in their mouths. And if not metal cutlery, diners are offered single-use plastic objects that add to modern society's mindless waste. But ask yourself this: what is the most successful restaurant brand on earth, the one that feeds more people than any other?

Across towns and cities worldwide, McDonald's serves millions of meals each day to be eaten... with hands. No cutlery. Is that part of their success? Could their success be owed to the fact that they are one of the few restaurants where adults (and children) can indulge by being allowed to eat food with bare hands? Another example of a world-famous staple that should be eaten with hands is pizza. Ask an Italian how it should be consumed; always with hands! There is even an etiquette on how to slice the pizza, how to hold it elegantly and bring it to the mouth—those who learnt the Italian way know that the pizza's juices hold better this way, and each morsel is much more delicious than they could ever be if the pizza were to be eaten with cutlery.

By now, I should have convinced you that the role of cutlery in modern life and social etiquette should at least be put in perspective. Of all the technologies we interact with every day, one of the most intimate (and one of the few we put inside our bodies, apart from the toothbrush) has barely made any evolution in the last few centuries. Innovations in cutlery are made mostly with visual considerations in mind. In our opinion, visual beauty should result from functionality, gesture and the material used to achieve these.

Today, the design of the tactile experience of food is pretty much limited to in-mouth stimulation despite the fact that our hands and lips are two parts of the skin organ that represent the most significant amount of somatosensory cortex in the human brain. And hands and lips could be the focus where cutlery and plateware design could be invited to bring an interesting addition to the multisensory world of eating. Innovating in the way we approach the act of eating could also have a fundamental impact on our food intake and health while maximizing the amount of pleasure we get from eating.

## DESIGNING MANNERS, DR. ANDREAS FABIAN

A social etiquette has emerged around the consumption of food in the West that requires the use of a set of tools we refer to as cutlery; e.g. a knife for cutting and a fork and spoon to transport foods from the eating vessel to the mouth. We are socially and culturally guided to learn their use as a function of subtle changes in their size, shape and material, and develop a set of manners that often depend more on social approval, rather than on what enhances the pleasure of food, ultimately creating a distance between the food and us.

Cutlery has become an extension of our hands in the act of eating, an essential part of our daily experiences. Cutlery has evolved with our eating habits and the development of technologies: the ‘toolness’ of hands has been slowly externalized in the form of utensils that allow us to bring food to the mouth.

By its very nature, tableware requires handling and use, which raises issues of social interaction, manners and etiquette. Animals eat their food without ceremony, often bloodily. Humans prepare their food carefully, and their eating is refined and ordered, according to cultural codes and social precedence.

The sociologist Norbert Elias sees the development of table manners in the broader context of civilization. Of particular interest is the connection he draws between table manners and language: “… there being people so delicate that they would not wish to eat soup in which you dipped it (the spoon) after putting it into your mouth. This délicatesse, this sensibility and a highly developed feeling for what was embarrassing, was at first a distinguishing feature of small courtly circles, then of court society as a whole. This applies to language in exactly the same way as to our eating habits.”

Elias makes clear the way in which, historically, people came to pay the same attention to eating manners as to their way of speaking and writing. Would we nowadays also draw a connection between ‘délicatesse’ (or language) and manners when observing the booming industry of good quality street food (and fast food) where people eat with their fingers, holding bowls and plates in their hands? Might this trend, in the long run, also influence tableware design and how we eat at the table?

It has been suggested that in the earliest stages, the need for restraint and codified manners was driven by courtly pressures during the reign of Louis XIV and his predecessors at the French court. The introduction of mirrors in the 17th century and the precedent set by the court at the Hall of Mirrors at Versailles, may have played a key role in the process of refining our (table) manners. Mirrors enhance our social awareness by allowing us to see ourselves as others see us—separating body and mind. Furthermore, it is interesting to observe how between the 18th and 19th centuries, European aristocracy, followed by the bourgeoisie, started to serve food in a new way. The so-called ‘French style’ was replaced by the ‘Russian style’ of serving food: as still common in most restaurants, individual plates of food were served to individual diners instead of a communal dish shared by guests. This clearly represents a shift towards individualism.

The very short distance from “the hand to the mouth” is not only a measure of manners but of how those manners are a metaphor for the history of civilization—representing our cultural values in

a particular civilization in time. Our culturally determined table manners influence the design of cutlery, and the design of our cutlery, in turn, influences our table manners and etiquette. For example, the introduction of the fork as an eating utensil in the 17th century became a ‘fashion statement’ and then became widely popular.

Cacao drink served in the “Hand bowl” prototype designed by Michel and Fabian. The vessel has a pointed base; hence its function can only be fulfilled when held in the hand. Through the sense of touch, in the palm of the hand, the user experiences sensations of weight, form and temperature.

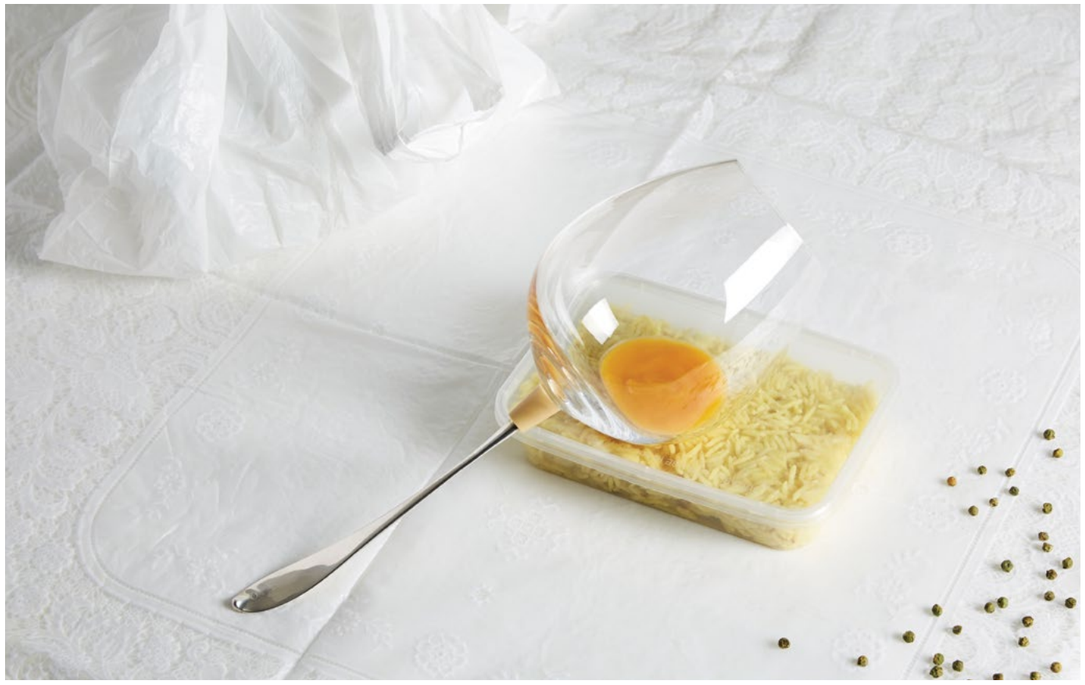
An indication of how much cutlery has become woven into the fabric of our culture is to examine how it has crept into language: many common sayings relate to cutlery, often to the spoon, illustrating its particular importance. For instance, The Who, in their 1966 song “Substitute,” parodied the expression ‘born with a silver spoon’ with “I was born with a plastic spoon in my mouth,” relating material (silver/plastic) to status (high/low).

Regardless of the material used to make it, when we eat with a spoon we are using an intensely intimate instrument: aside from feeling it in our mouths and on our lips, it’s worth reminding ourselves that we often use spoons that others have previously had in their mouths. Artist Richard Wentworth described something of this intimate and extraordinary phenomenon, albeit discussing plates: “The strangest thing about plates is that when you sit down to eat you get your own, but the moment you finish it’s somebody else’s. Plates operate in a complex world of manners, sharedness and separation – a public/private thing, enormously widely experienced. This makes them very special.”

Tableware exists within a highly complex field in terms of how it is experienced and how it generates meaning. For example, the way we handle the spoon between thumb and fingers nowadays is defined by manners and etiquette. Handling a spoon instinctively (as a child would), now seems inappropriate and has become culturally determined. In this sense, the spoon cannot be defined only as an eating utensil but must also be reckoned as an instrument of social distinction. Furthermore, a small drop of soup on the bottom of our spoon might cause our entire body language to shift lest it falls and leaves a mark on a table cloth and, more significantly, a stain on our social reputation.

The form of cutlery might change over time depending on technology, fashion and imagination, but its function goes far beyond its purely practical purpose of bringing food to the mouth. Despite the omnipresence of eating tools across cultures, it seems that in recent centuries they have been designed with mainly aesthetic, ergonomic and functional purposes, according to the rituals and social manners of the table.

How interesting could it be to think and design the opposite way—designing social manners according to innovative eating implements and technologies?



Andreas Fabian’s “spoon-glass” is a hybrid product, fusing the functions of a silver spoon and a wine glass to develop a new language of interrelations between aesthetics, design languages and functionality in ways which formally, and conceptually, challenge our habitual practices and rituals of dining implements and experiences.

# Experimental Gastronomy

Often the seed of a great idea begins with a simple list. In this case, it was a grocery list. In 2012, Martin Kullik decided to become vegan. After visiting a number of organic grocery stores in Amsterdam, where he and his partner Jouw Wijnsma are based, Kullik noticed that most of the legumes sold were sourced from China. This troubled Kullik. He knew that The Netherlands produces a variety of beans. In fact, some significant varieties produced in Friesland, where Jouw's family resides, are included in the Slow Food Ark of Taste.

So Kullik and Wijnsma, who had also been curating experiential projects combining fashion and jewelry design with performance art under the name Steinbeisser, began to compile a list of local food producers. The logical next step was an event that combined their professional expertise with their personal passion. In 2012, Steinbeisser invited a local chef to develop a vegan dinner using only biodynamic ingredients sourced from local producers. They also decided to continue their curatorial work by commissioning the jewelry designer Maki Okamoto to design innovative utensils and tableware specifically for the occasion. From a small dinner with 27 guests priced at 27 Euros for a five-course meal, *Experimental Gastronomy* has become a celebrated international event with pop-ups in Basel, San Francisco and Berlin. On the heels of celebrating five years of *Experimental Gastronomy*, Kullik reflects on fusing function and aesthetics, the importance of designing with found materials, and how utensils can cultivate mindful dining rituals.

We hosted our first dinner in July 2012, and it was quite a small —we had 27 guests. We created the project to invite chefs to explore vegan cuisine using 100% locally-sourced, biodynamic ingredients so, in Amsterdam, they can't use olive oil, vanilla, avocado or mango—focusing only on what's here in The Netherlands and seeing what one can do with that. Because our background is in curating, we wanted to invite artists, of course, to participate. So we invited the jewelry artist Maki Okamoto to create the cutlery for the event—she's the one that made those connected fork-spoons.

When we first started working in fashion, jewelry and applied arts as Steinbeisser, we noticed that function and aesthetics were drifting a part. Functional objects would not be very aesthetic, or something aesthetic would not be very functional. And that really got on our nerves. As we defined the concept for *Experimental Gastronomy*, we wanted to create pieces that are aesthetic, but they have to be functional. That means that although the artists reinterpret the cutlery and dishware, the objects have to be able to serve food. Some objects manage to fuse both—to be aesthetic and functional at the same time—while other objects are more experimental.

When commissioning tableware, our first design parameter is the piece must be made from natural materials. Then, we ask the artists to recycle, upcycle and reuse materials as much as possible. If 100% of the pieces created are made of recycled, reused or found materials, that would be perfect. We focus on reusing materials because there's already a lot of garbage in the world. By taking objects that have fallen into disuse, we can reshape it and give it a new life—a new purpose.

In our experience, we like working with jewelry designers and artists. A lot of designers know how to project ideas, sometimes using software or sketching, but they aren't making the objects themselves. That's not how we want to work. We aren't making mass products—we like the handmade and the feeling of the artist's hand. One can shape pieces like Maki Okamoto, where she cut cutlery pieces apart and then fused them together. There's also Nils Hint who reused old Soviet tools. As a blacksmith,



he reshaped them and connected tools with cutlery or melted cutlery out of tools. Stuart Cairns used a lot of found materials because every morning he walks along the beach and finds things like driftwood and plastic. He takes those pieces and asks: What kind of element should I connect to these found materials so that they can become a spoon or a vessel that can be used?

Most of our dinner guests are really excited to have a go at the pieces. They take their time. They explore how one might use the pieces, so the whole process of eating becomes much slower. While they're eating, they look at the pieces, and they'll put the piece down in between bites.

Some people might say, "Oh, no I demand a standard spoon." But then I sit down with the guests and I say, "You've come to this dinner, and it's a special experience. It's only one night, and you've come here on

purpose. After all, it's called *Experimental Gastronomy*." We haven't had a guest go for the standard spoon yet. People struggle with it, they might get angry or frustrated with the pieces, but in the end, they still try to have a go at it.

If guests understand that these pieces were created specifically for the evening and for their use, they feel really appreciated. This same feeling can be achieved if you were to pay the same attention that goes into preparing a dish into creating the cutlery and the dishware that you use to serve and eat food. The cutlery and the utensils we use every day can inspire people to be more conscious about what we eat. Our daily habits feed us and we should pay more attention. With the right tools, routine is much more precious.

# A Seat at the Table :

# Martino Gamper's

## *INGREDIENTS FOR DESIGN*







INTERVIEW BY CLAIRE WALSH

Food and experimentation are a recurring theme in Italian designer Martino Gamper's work. Before studying sculpture at Vienna's Academy of Fine Arts and later while pursuing a Masters at the Royal College of Arts in London, Martino worked in kitchens where he learned the art of improvisation.

Works such as *100 Chairs in 100 Days,* in which he created useful new chairs by fusing the stylistic and structural parts of discarded seats found on London streets, demonstrate Gamper's ability to revel in the process and create truly unique work.

Based in London, Martino and his wife, artist Francis Upritchard, have recently renovated a printing factory into their living and work quarters. MOLD spoke to Gamper in their studio kitchen where the couple take breaks, and cook and eat together with colleagues to punctuate their day.

C. WALSH What is the immediate connection you see between food and design?

M. GAMPER I think they're not too far apart from each other. You start off with a set of materials or ingredients, and they vary depending on where you are. And then you have a set of processes, i.e. cooking. You take material away, you add material, you mold something, and so on. And these processes are being reinvented as we speak, but somehow, we always come back to what we could have done many, many years ago. So, from a creative point of view they are similar.

CW How do you use food as a tool in your process?

MG Well luckily, we should take food every...what 4, 5, 6 hours a day? So, there is a break to maybe have conversations or continue a conversation. I think that can help in the design process. I mean for us [Gamper's studio and studiomates] it is true. We try to cook every day together, and it slows things down a bit. It's not just something that we have to do, it's something we can enjoy and do together.

CW You've been called an improvisational designer; do you cook similarly to the way you design?

MG Oh yeah, absolutely. The way I cook is quite like the way I design. It's kind of a process but it's quite spontaneous and quite improvisational—

CW I use whatever I have available. I actually cannot keep to a recipe!

Tell me how Trattoria al Cappello, the pop-up dinners where you and your collaborators designed everything from the food to the furniture, started?

MG Four of us that started the project; me, Maki Suzuki, Kajsa Ståhl and Alex Rich. The project evolved out of a lack of places that we liked to go to find something to eat, so we decide to create something ourselves. We were all interested in cooking and the social aspects of getting people together. We found a warehouse space that had a bar and a license, but no food. We had the food, they had the drinks, so it was kind of a perfect combination.

CW Has it played a big role in your career?

MG Yes, I think so. A lot of work came out of it somehow. Initially it was experimental and maybe we were designing out of a necessity to create these events. That experience was later translated into something more, I wouldn't say commercial, but more product or into other ideas.

CW Did your experience with Trattoria affect how you design an object?

MG During a Trattoria event we moved around a lot and we could observe people while we cooked and while we ate together. It gave me a different viewpoint on the table, and I saw how people interact both with the furniture and with one another.

Where you position yourself and how you face someone is something I think about. I like to create very individual looking chairs, a bit like people sitting around a table—all the same but slightly different. Rita, for example [created for Milan's Gallery Nilufar], has a left and a right, so there is the sense of two people having a conversation.

CW You also designed playful tableware for Trattoria, too.

MG Yes, we customized cutlery. We drilled a hole in all the pieces, so all the spoons were on a ring. You would pass the cutlery around the table like a relay.

CLOCKWISE FROM TOP
Sonnet Butterfly, Giro, Ply on Ply. From *100 Chairs in 100 Days*, 2005-2007.
LEFT Art & Business Culture House dinner. Trattoria team, 2009. Photo by Amit Lennon

CW What about the pepper grinder you designed? The shape is interesting.

MG I realized that with a lot of round or square pepper grinders, when you hold them your body is at an angle. When something is conical it is easier to turn. So, I slice away corners until it feels nice in the hand. When I see a piece of wood, I always imagine slicing a bit away. I don't like straight edges.

CW Your tables tend to be irregular shapes too.

MG Once you have eight people around a table there is not one single conversation but a lot of smaller ones. Each of my tables is a different shape so I can recreate the layout or composition of how people like to sit together. They can sit close together in the middle or further apart at the sides to make the experience more than something square, rectangular or round; those shapes don't do justice to the way we sit around a table. Even if I do a round table, it will be oval so people can be closer in the center.

CW How do you approach the design of a table?

MG I like to create flexibility. People often ask for a "little extension," and I ask them, "Why have an extension you use once a year? Why don't you have two tables that become a larger table?" There is a sense of modularity and generosity by keeping a table a certain size. Tables are used not only to eat on, but also for work and for other activities.

CW Do you still ask for a dinner invitation when you are commissioned to design a table? Why is that?

MG I try to get a sense of the environment. I observe behavior and how people eat: Is it just something they are putting on for me, or is it a regular occurrence? What's the family ambience? [Dining together] creates all kinds of dynamics. A table can be a centerpiece in the house where the family gathers, where meals are being cooked—it is the kind of thing that pulls us...a nucleus.

LEFT Omback, Tubolare
RIGHT (from top): Barbapapa, Alpino, Back Issue.
From *100 Chairs in 100 Days,* 2005-2007.

# When a Carrot Can be a Cloud

*PERSPECTIVES*

FOOD AS CONNECTED DEVICE
FOR THE MODERN WORLD

Photos by Thomas McCarty
Text by Emilie Baltz

IN 2005, MOLECULAR GASTRONOMY HAD TRANSFORMED THE DOWNTOWN FOOD SCENE. SCIENCE COLLIDED WITH COOKING AND WHAT WAS ONCE KNOWN AS A CARROT COULD NOW BE A CLOUD.

The excitement and invention that permeated those times was intoxicating. I was working as a waitress in the new wave of modernist restaurants and loved the theater of life in these spaces—the daily performance we'd all prepare for, serve up and close out each night, as diners would cruise in and out of our doors, delighted by the radical flavors they encountered. That sense of transformation, pleasure and creativity made me fall in love with the world of food and put me on the path to becoming a food designer. The journey speaks volumes about how we might approach the future design of food.

Leaving the restaurant world, I studied industrial design and learned that design was nothing more (or less) than a plan or convention for the creation and construction of some thing that solves a problem in our lives. Be it shoe design, furniture design or graphic design, the design process delivers artifacts that help us do everything from run faster to see better. On deeper inspection, I also learned that the best-designed

stuff fulfills emotional needs: subliminally screaming, “YES YOU CAN! There ARE other ways to live, act, run, be! JUST DO IT!”

Marketing jargon aside, this emotional connection to new possibilities was the same reason I had fallen in love with bars and restaurants. Design was more than stuff; it was a structure within which to create abundant possibilities, exercise wild creativity and actively reinvent our lives.

The advent of digital technology has moved us closer to this insight. What was traditionally defined as design through shape, color and form is now talked about as the business of systems, processes and experiences. Be it on-demand ride-sharing in lieu of taxicabs, the Bitcoin as a replacement for the dollar bill, or apartment swapping instead of hotel rooms, the future of design is less about single artifacts and more about an ecology where every thing is connected, communicative and part of a greater network that affects our entire life.

Professionally, I spent a few years working as an industrial designer while this new landscape emerged, but I quickly found myself back in food. As an industrial designer, I was trained to leverage the properties of whatever material was at hand, and food proved to be endlessly inspiring: serving up new feelings, sounds, smells, tastes and textures with its multisensory properties. By adding technology to the mix, I started to think of food in a whole new way. Consider this: from feeding our biology, to bonding communities, nourishing families, stimulating economies and conveying emotions, the ritual of eating reaches far beyond mere ingredient. I started to think of food as our first “connected device”: bringing together planet, people and politics through its design.

In this light, it no longer makes sense to think of designing for food as just a plate, a table or a fork. Emotions and experiences are the *lingua franca* of the modern world. By using technology as an ingredient, food can now be used for more than just chew, swallow, repeat. Consider businesses like Seamless, who use tech to create instant access by breaking down the walls of a restaurant and serving us meals directly in our homes. Or companies like City Farms whose technology upends traditional agriculture by growing crops indoors. And products like SproutsIO, that allow ingredients to become canvases for creativity by empowering cooks to program in-kitchen climates and design tailor-made produce. These applications demonstrate how food can be an ingredient for the new experiences of a tech-centric future: expanding efficiencies, transforming ecologies and increasing

control. Yet, humans do not live on bread alone. And while technology has drastically improved many parts of our food system, one, basic, necessary piece is rarely addressed: human emotion.

I fell in love with restaurants because of the feeling in them—the wonder, delight and transformative nature of a great dinner is unlike anything else in the world. How can our future catalyze more of this beauty in the world? At heart, the real ingredient in transformation is discovery. Great meals teach us something new, as do great relationships, products and experiences. In my practice, I am dedicated to fostering this way of being in the world and create dinners, products and pedagogy that use food to reveal the hidden possibilities in our world.

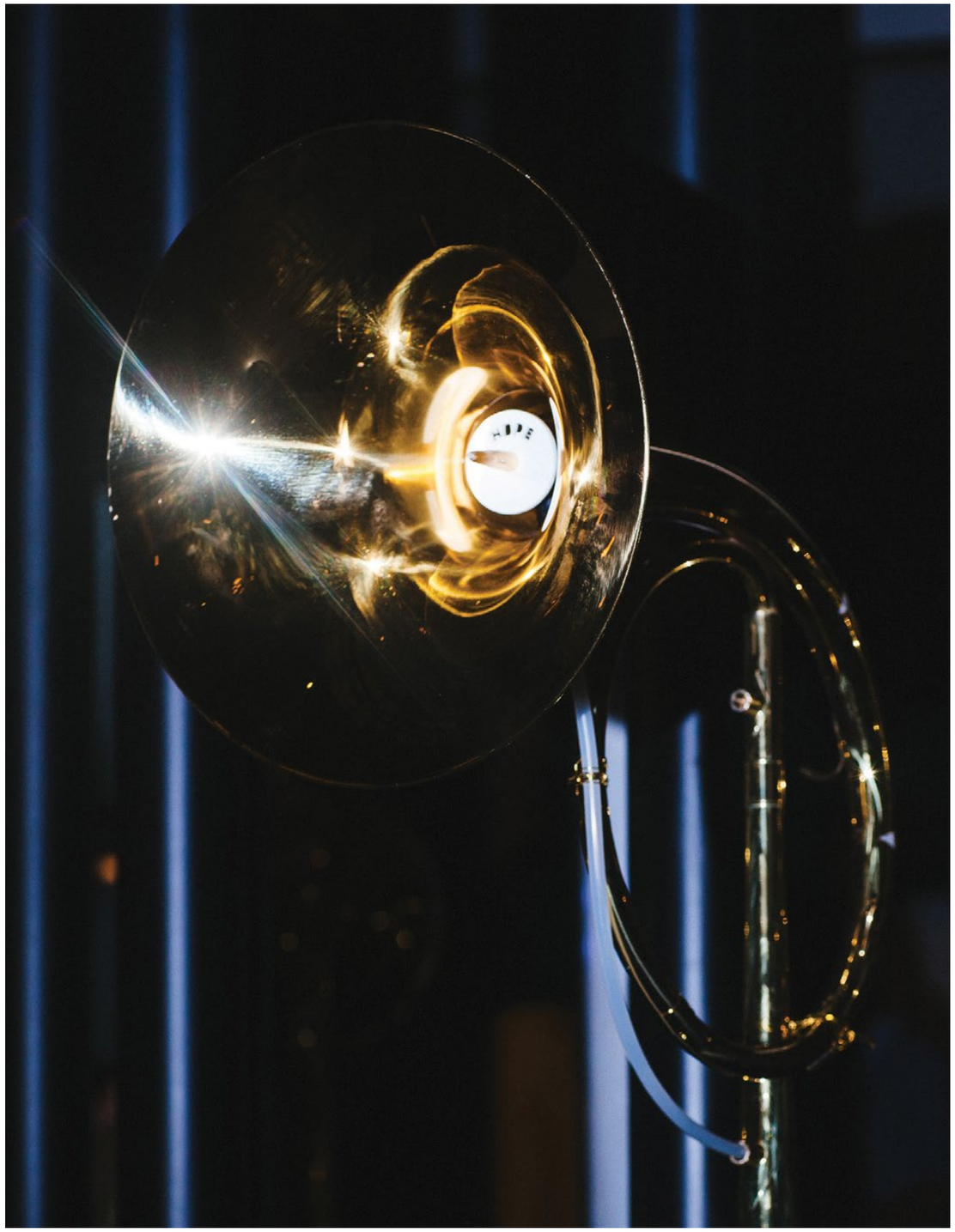
For example, in 2010 a "new" crowdfunding technology enabled What Happens When, a pop-up restaurant I co-founded with Chef John Fraser and designer Elle Kunnos. As one of the first food projects on Kickstarter, the restaurant transformed every 30 days based on patron suggestions. The result tasked us with entirely redesigning the restaurant interiors, menu, soundtrack and service overnight. Thanks to Kickstarter, the project became more than just a physical space, allowing patrons to follow the progress online, comment and become part of our creative process. In the end, the pop-up was less about the food, but more about the process and discovery of "what happened next…"

Soon thereafter, the accessibility of sensing technology served up new ways of experiencing the act of eating. In collaboration with artist and designer Carla Diana, we experimented with capacitive sensors in ice cream and discovered the *Lickestra!*, the world's first licking ice cream orchestra! By using this technology, the act of licking triggers a musical riff, transforming a group of eaters into performers and radically reimagining what an everyday act of eating might be.

New technology has been a constant source of wonder leading me to develop several more firsts, including a *Cotton Candy Theremin* that reacts to the gestures of spinning fairy floss, *Ice Block Speakers* that sing when touched, a *Scent Organ* that delivers a multisensory orchestra when played, and more wild creativity than my younger self could have ever imagined.

But the greatest lesson herein is that "new" shouldn't be the catalyst for the next generation of dining rituals. True invention comes from embodying possibility and fostering curiosity. Technology can facilitate innovation, but real transformation only occurs when discovery is achieved. What if we imagined our future dinners as just that? Laboratories for learning, wonder and discovery. What might that do to our daily life?

One of my heroes, the neuroscientist Oliver Sacks, stated, "We are not given our life, we make our life." Our materials, choices, projects and relationships are the ingredients of our lives —how we design this recipe is how we consume our everyday. As technology rages forward, politics collide across cultures, and natural disasters become commonplace, I can think of no better material (or metaphor) than food for reimagining how we nourish ourselves and our planet.



Interacting with the Scent Organ, a multi-player olfactory organ that combines smell with sound, touch and light. New Lab, New York City, 2017.

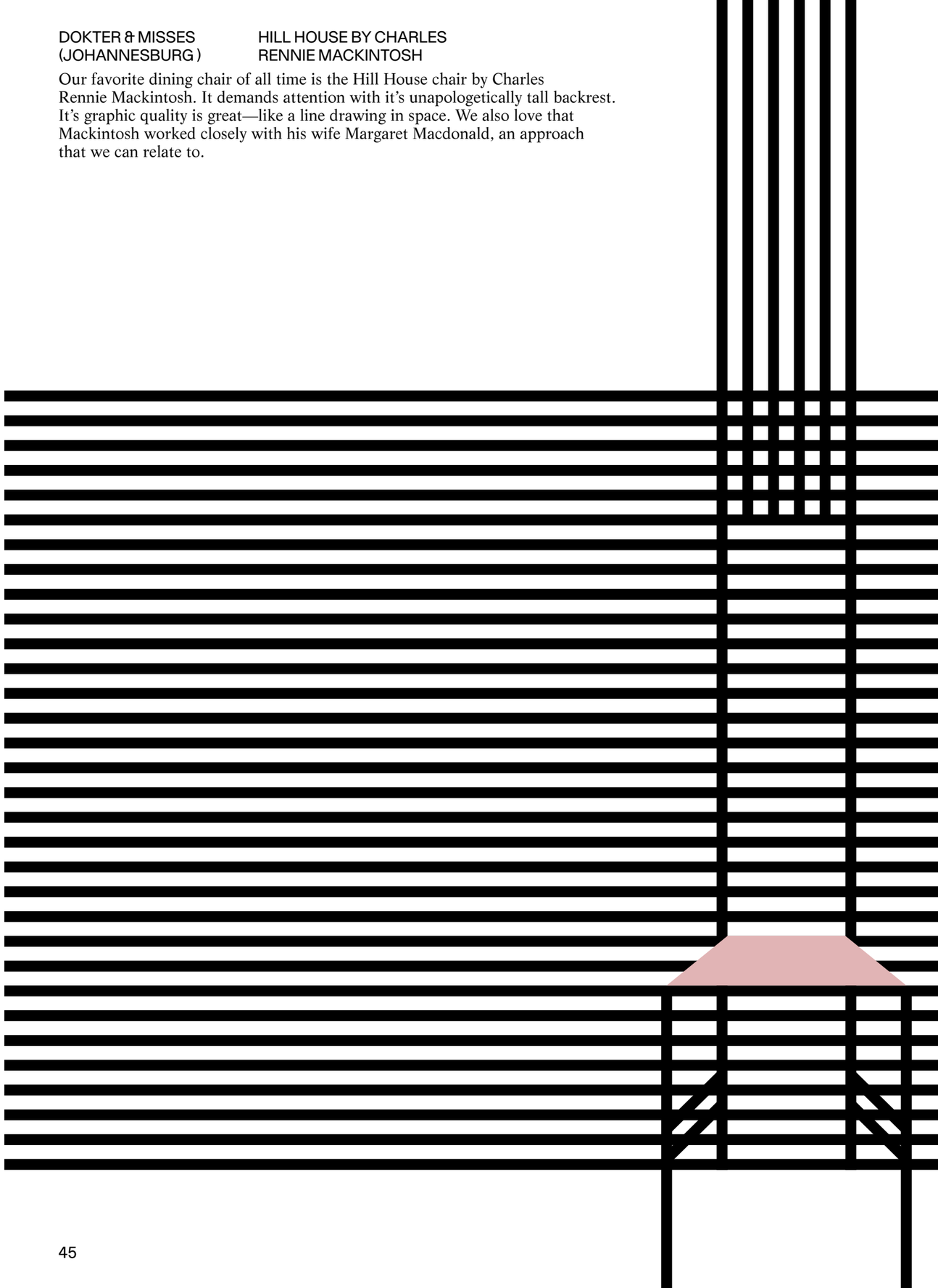
# My Favorite Things

## *10 DESIGNERS ON DINING CHAIRS*

DOKTER & MISSES (JOHANNESBURG )

HILL HOUSE BY CHARLES RENNIE MACKINTOSH

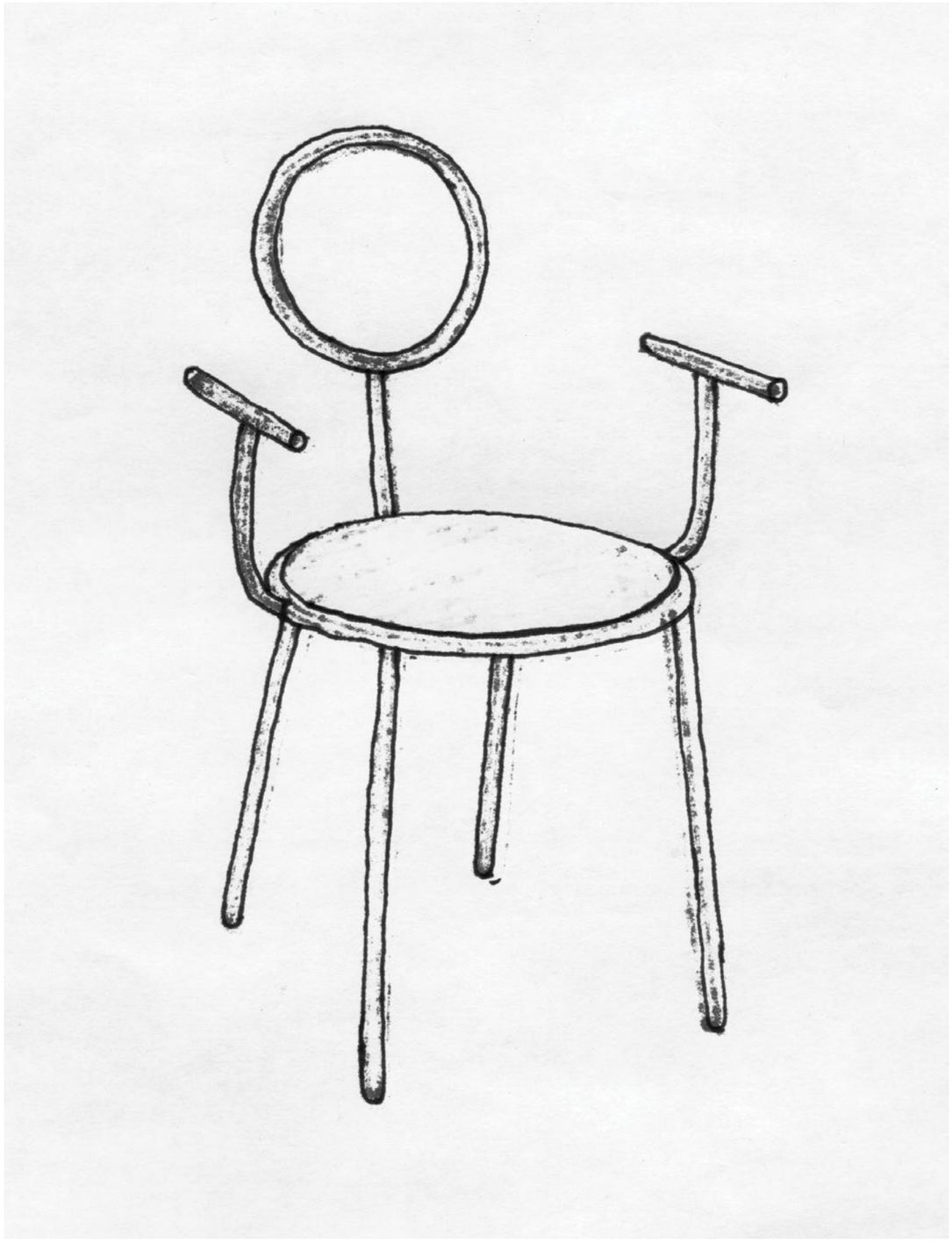
Our favorite dining chair of all time is the Hill House chair by Charles Rennie Mackintosh. It demands attention with it's unapologetically tall backrest. It's graphic quality is great—like a line drawing in space. We also love that Mackintosh worked closely with his wife Margaret Macdonald, an approach that we can relate to.



FREDRIK PAULSEN
(STOCKHOLM)

STELLINE
BY ALESSANDRO MENDINI (1987)

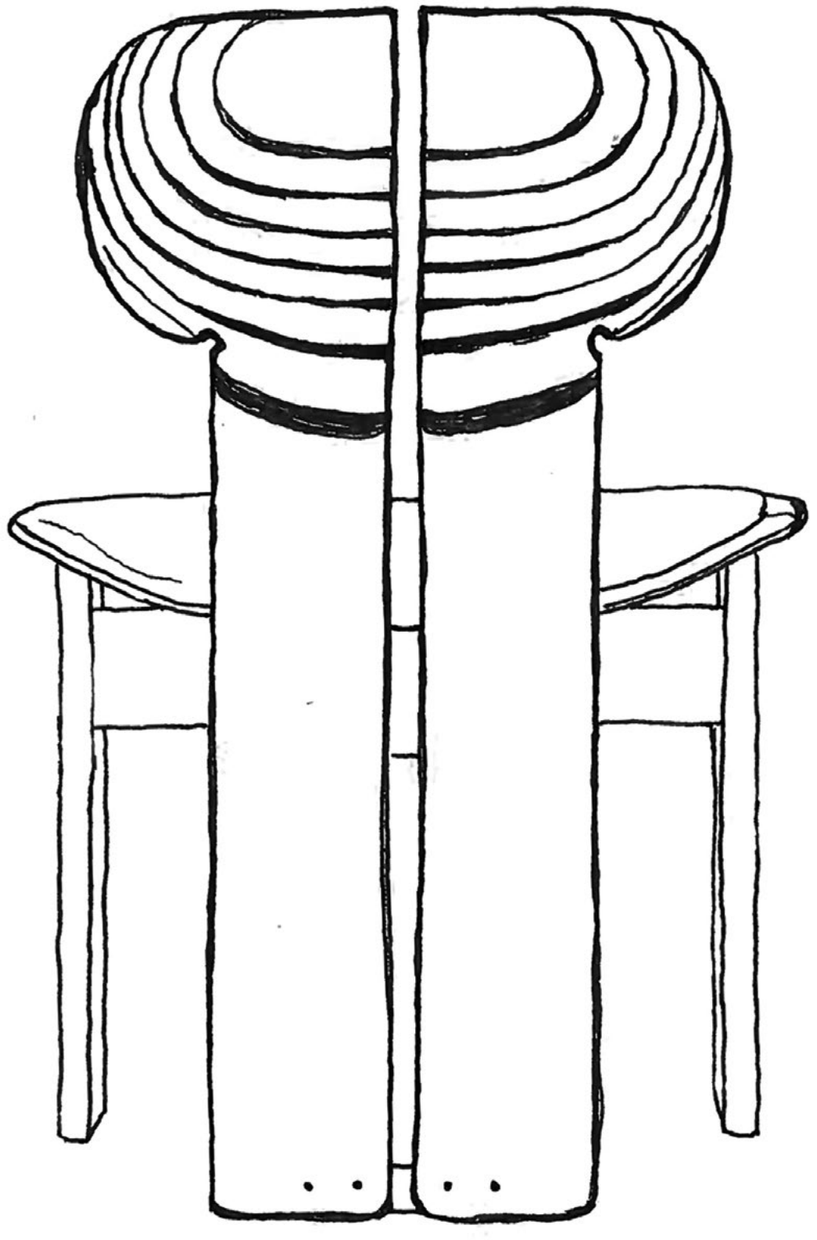
The Stelline armchair by Alessandro Mendini makes me really happy. It reminds me of a child's drawing. It's simple but has so much character.



KELLY BEHUN
(NEW YORK)

ARTONA BY
AFRA AND TOBIA SCARPA (1975)

I love the Artona chair by the husband and wife designing duo Afra and Tobia Scarpa for Maxalto, from 1975. Let's face it, a dining chair is all about how it looks from behind, and this chair has an incredibly sexy backside.



PEDRO PAULO VENZON
(FLORIANÓPOLIS)

GOOD LUCK
BY PETER SHIRE (2017)

What interests me about Good Luck is its somewhat perverse look at modernist functionalism and its effort to put limits on hold. These limits relate to the "postmodern generation," and today, they affect me from a decolonial or post-colonial viewpoint. But they're still capable of re-asking questions about design and its related fields.

GIRAFA
BY LINA BO BARDI (1987)

"Girafa" is something of an affection. "Dona Lina," as Maria Bethania still calls her, is a sort of intellectual mentor, a place where one's gaze rests on the shape (of the designer, artist or architect in Brazil). The chair itself is an event. It is one more game with the limits of the artifact and of Brazilian national identity—an open discourse, in production.

SHIN OKUDA
(LOS ANGELES)

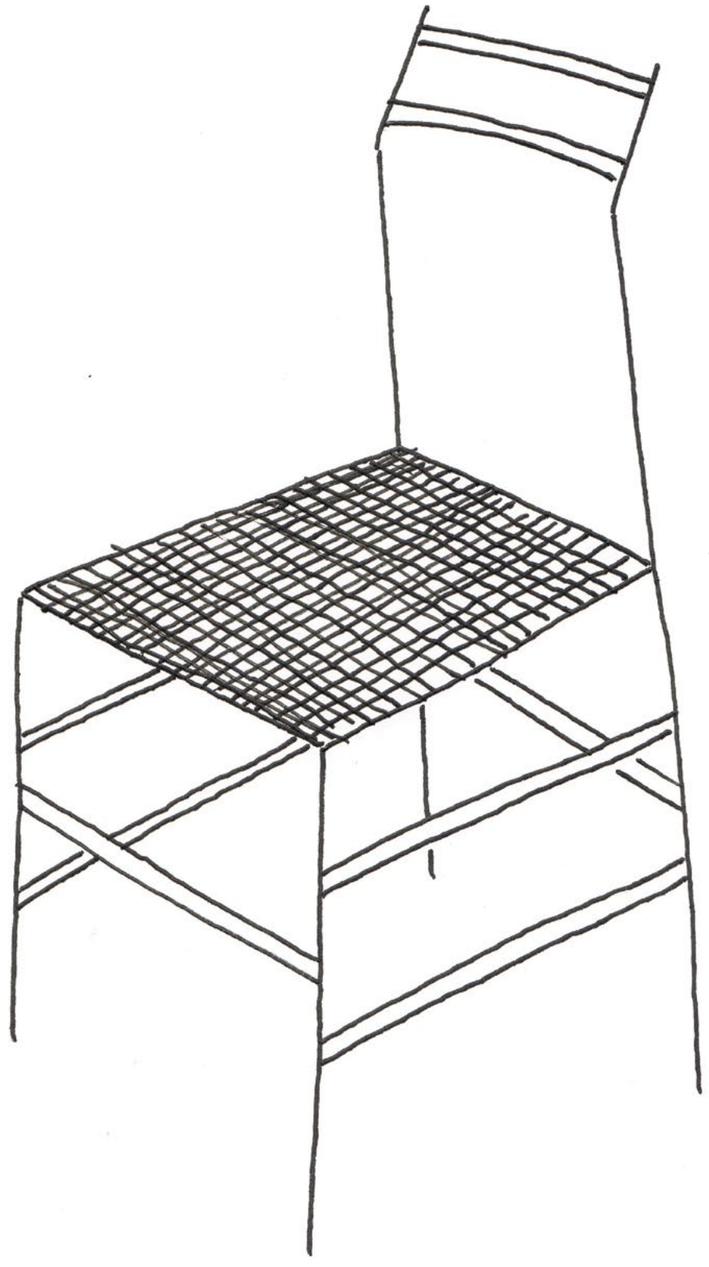
THREE-LEGGED CHAIR A
BY SHIRO KURAMATA (1983)

It's a beautifully minimal design with a very humble approach to comfort. I like a chair designed for a dining table to be the accent point. The table holds the food, but the chair holds the people you are there to be with.

PHILIPPE MALOUIN
(LONDON)

699
BY GIO PONTI FOR CASSINA (1957)

I chose the 699 chair by Gio Ponti for Cassina, also known as "Superleggera" because it's a fantastic example of industrial design genius with high, yet minimal aesthetic sophistication. The ash and cane model represents, in my view, the very best of modern design. The chair, as light in weight and appearance as it is, is sturdy and tough. In a way, this chair inspired my Typecast chair for Matter.



NOMADE ATELIER
(MEXICO CITY)

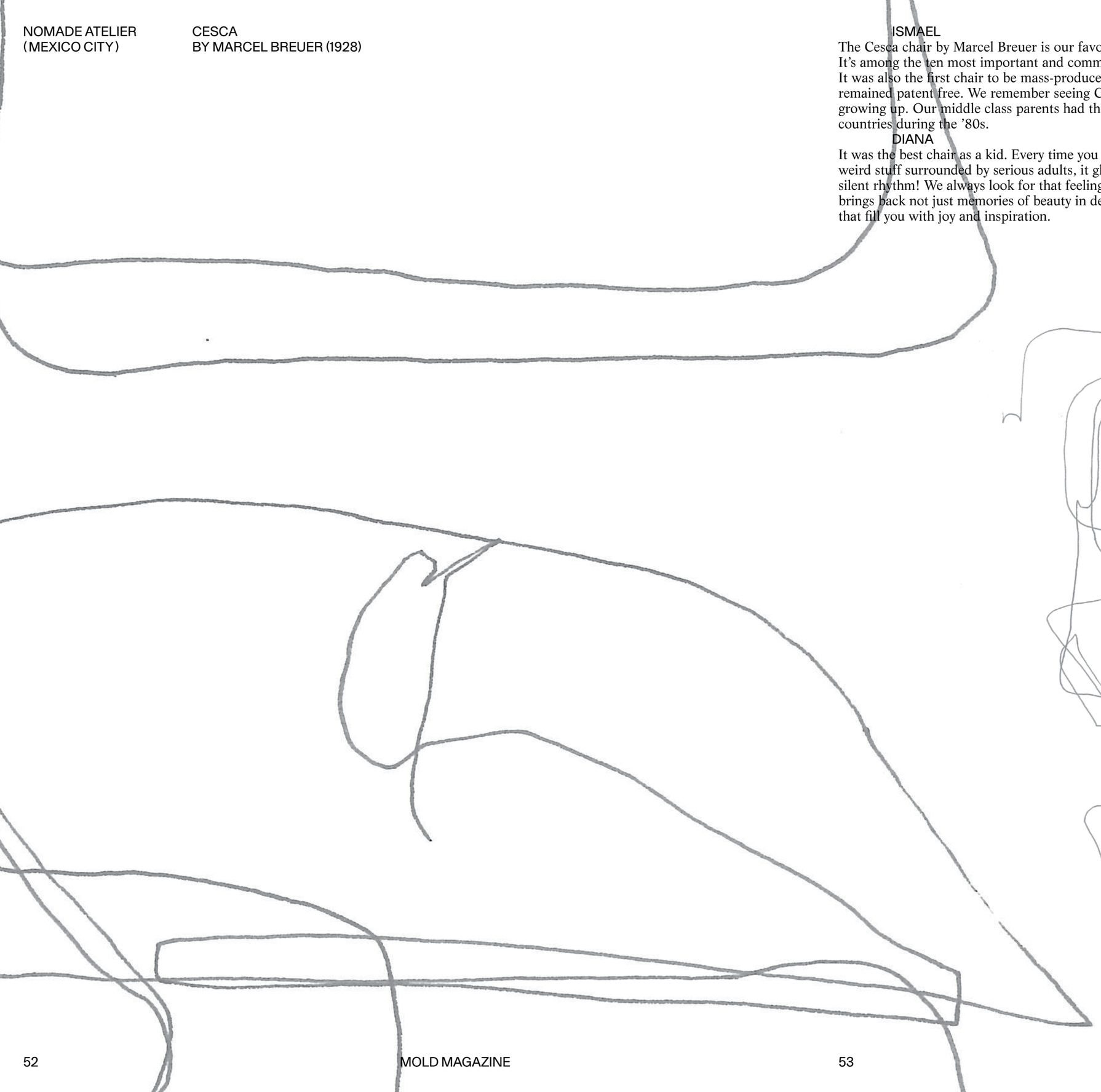
CESCA
BY MARCEL BREUER (1928)

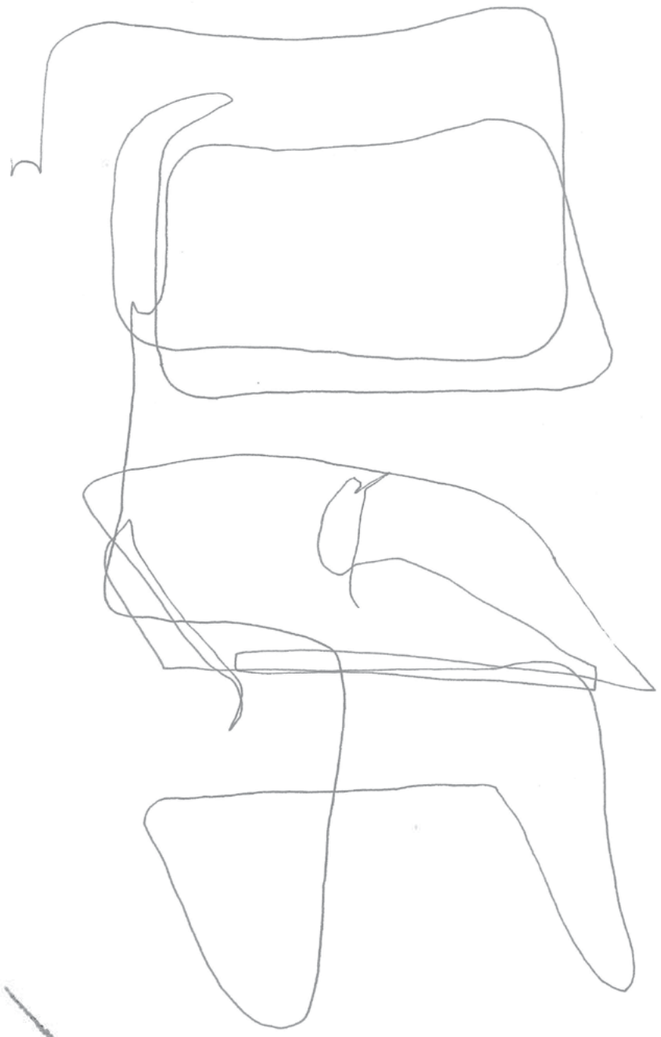
ISMAEL

The Cesca chair by Marcel Breuer is our favorite dining chair of all time. It's among the ten most important and common chairs of the 20th century. It was also the first chair to be mass-produced, starting in 1928, and has remained patent free. We remember seeing Cesca chairs in lots of homes growing up. Our middle class parents had them, even if we grew up in different countries during the '80s.

DIANA

It was the best chair as a kid. Every time you were bored and obliged to eat weird stuff surrounded by serious adults, it gladly bounced with your happy silent rhythm! We always look for that feeling in our work, the one that brings back not just memories of beauty in design, but moments and sensations that fill you with joy and inspiration.





PETER SHIRE
(LOS ANGELES)

To pick one chair, is to choose one kind of food, or one way of being at the table.  175 chairs: that's a modest guess at the number of chairs that I crave. Vinyl, Naugahyde, appeals to me so graphically, it's irresistible.

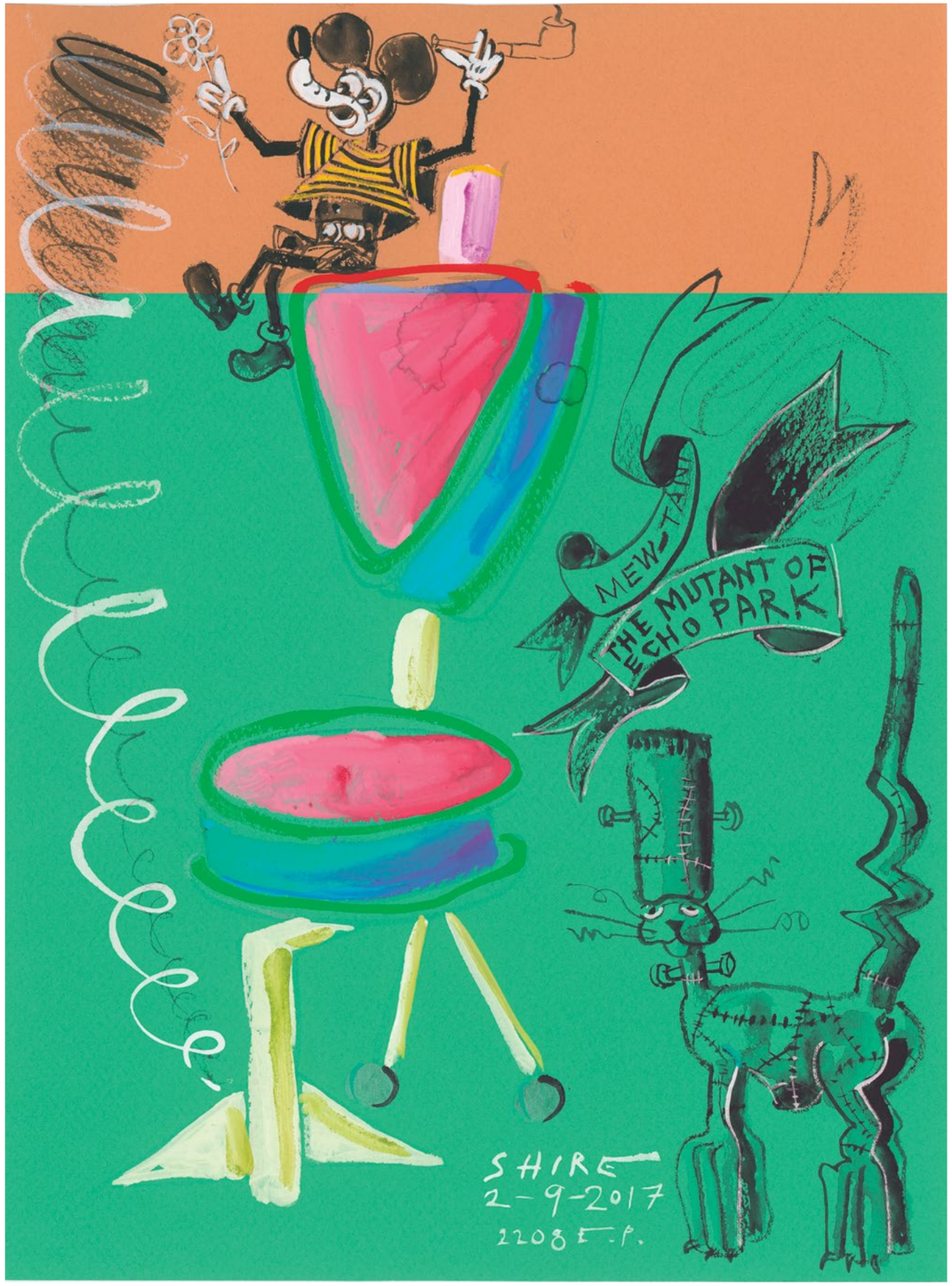
MEW-TANT OF ECHO PARK SKETCH
BY PETER SHIRE (2017)

Wouldn't it be great to have dinner in the most luxurious, comfortable chair? Perhaps it would be for dining in the style of the Romans...reclining. If I were to have a favorite chair, maybe a chair could have me as a favorite, and this one won't leave me alone. To the degree that it's not only iconic, but it's non-stop with new colors that are umbers and siennas expanding away from the many colors that I normally use. Can something new be completely old at the same time?



BEL AIR
BY PETER SHIRE (1982/2017)

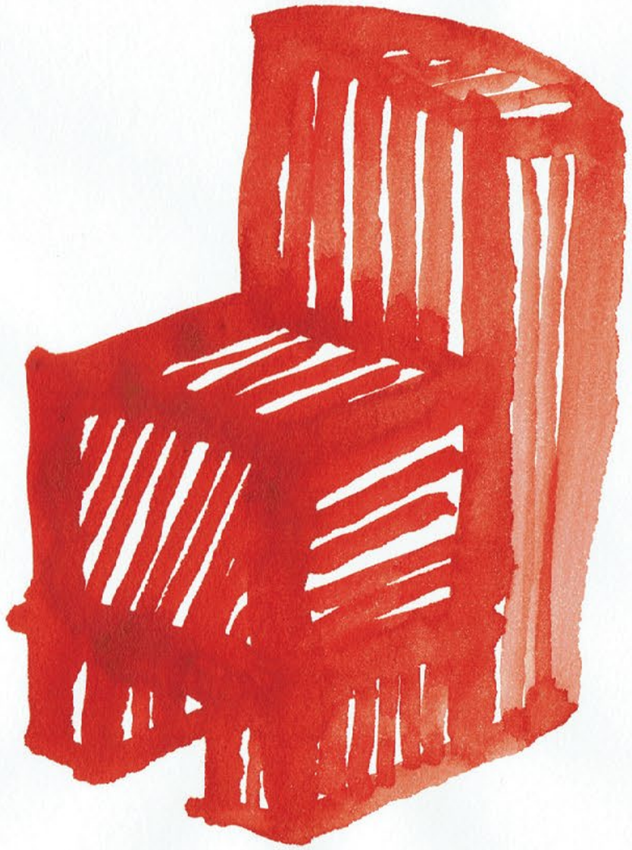
This cross between a diner stool and all the correct ergonomic heights has attracted me so that all my alter-egos are in it; anything with piping is orgasmic.

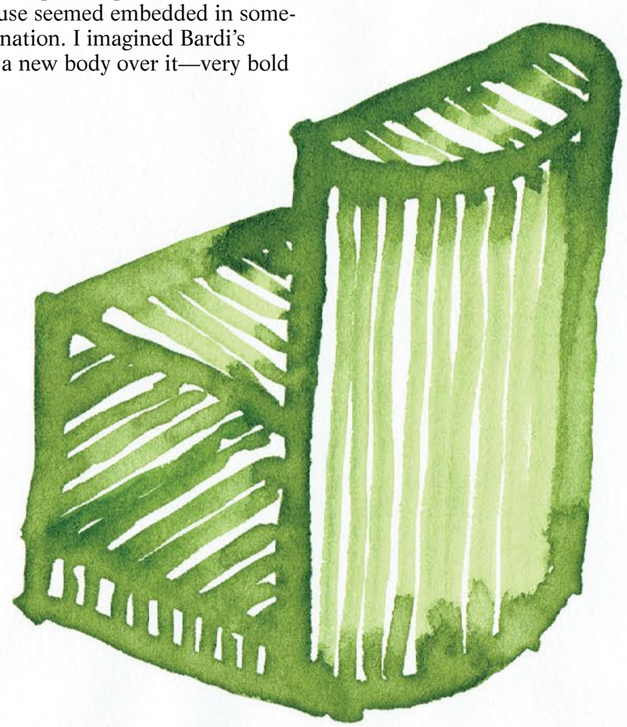


KWANGHO LEE
(SEOUL)

GIRAFA
BY LINA BO BARDI (1987)

My favorite dining chair is Lina Bo Bardi's Girafa chair. I recently visited her Glass House in to São Paulo, and got the impression that the city, her architecture and the chairs in the house were one great, perfect picture. And it wasn't simply about its amazing design, the house seemed embedded in something beyond it, like life. I can't forget the fascination. I imagined Bardi's Girafa chair as a structure and put the form of a new body over it—very bold forms in contrast. I named it 'hippopotamus.'

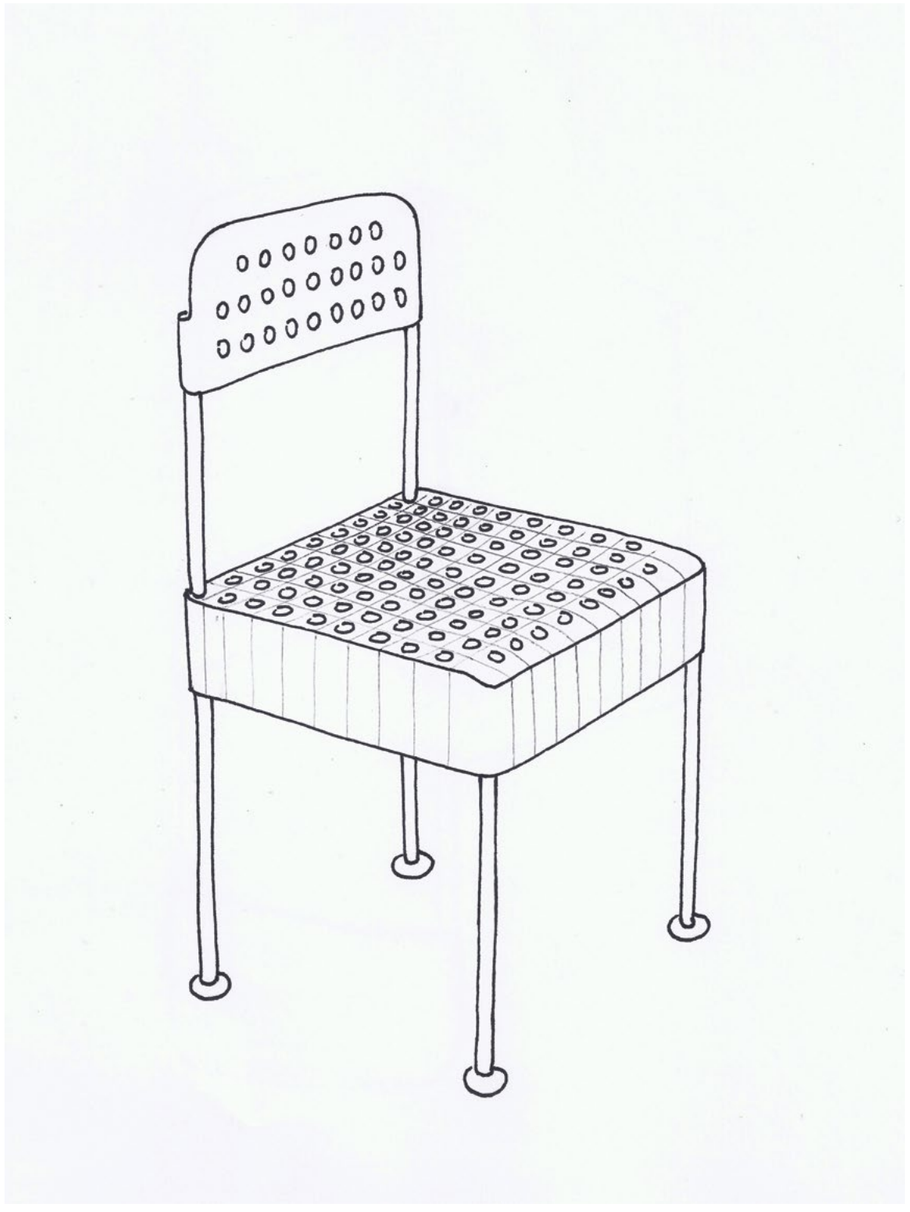




STUDIO JUJU
(SINGAPORE)

"BOX" CHAIR
BY ENZO MARI FOR CASTELLI (1971)

We love the "Box" Chair by Enzo Mari. It was designed to be self-assembled and easy to dismantle. But it doesn't look like a knock-down. It possesses a strong and unusual character, through its color, its stature, its form and its construction.



*All sketches courtesy of nominating designers.*

# TABLE FOR ONE

TEXT BY

KAREN DAY

PHOTOGRAPHY BY

SAMANTHA FRIEND

# If the thought of enjoying a seven-course tasting menu at a Michelin-starred restaurant by yourself sounds wildly awkward, consider this: When are you ever really alone?

TABLE FOR ONE

Thanks to the iPhone, we have hundreds of friends at our fingertips no matter where we are. It's for this reason (and the world's increasing interest in gastronomy) that #solodining alone has 8,000 posts on Instagram and OpenTable, the online restaurant reservation system, saw bookings for parties of one grow by 62% in 2015.

But unless you're slurping ramen in one of Ichiran's "flavor concentration booths" designed specifically to seal off individual diners, chances are that going to a restaurant alone can still inspire nervous feelings.

With that in mind, we checked in with some of New York's finest from across various fields to see if there's a perfect formula for this fast-emerging group. Here are some of the design choices for making solo diners feel welcome.

FOOD

The fine dining industry has seen an uptick in reservations for one because, well, foodies really love their food! Eating alone allows you to focus on the flavors and presents a greater opportunity to engage with staff to learn more about your meal. Chef Amanda Cohen of Dirt Candy doesn't feel sorry for people on their own ("they're having dinner with the coolest person they know!"), but she does admit to giving them extra attention. "I think that there is a certain amount of social pressure not to go to a restaurant if you're by yourself, and to me, the people flying solo in the Dirt Candy dining room often look like they have the most fun. I want them to keep coming back," she says. To further entice them, Cohen holds Solo Diner's Week at Dirt Candy and creates a special tasting menu so the person can try just as many dishes as they would eating with someone else. "To me, the worst part about eating alone is that you don't get to try as many different dishes. So I'd rather make the portions smaller but still send out the same enormous number of dishes. I've always thought the fun of eating out was getting to taste a bunch of different flavors, rather than just filling up on one plate."

INTERIORS

While they've never designed a table for one like those found at Eenmaal—a now-defunct restaurant concept in Amsterdam dedicated to singles only—Brooklyn's Home Studios has created several establishments that place prominence on the bar area, which is where most individual eaters tend to gravitate. Home Studios' Oliver Haslegrave says centrally placed bars with some curve or return creates a feeling of shared energy. "I can see how having a [circular] communal-style bar could make a solo diner feel more included, but if everybody else is in a group, it might make you feel more self-conscious," he says. "Whereas if you're at a straight bar, no one is really looking at you." Another aspect they consider is powering up at the bar: "Depending on the project, we've added outlets and/or USB ports under the counter where the coat hook would be, but they're as discreet as possible and as integrated as possible." As he notes, having wires around can kill the vibe. It's for that reason he thinks adapting the architecture or interiors for individual eaters isn't as important as having a hospitable staff that goes the extra mile to make that person comfortable.

HOSPITALITY

The way restaurant employees react to a solo diner matters immensely; a friendly server can make or break the experience. Sam Lipp, Director of Operations of Union Square Cafe and Daily Provisions, says the crucial element in making solo diners (or any guest) feel welcome is to listen to their verbal and non-verbal cues. "Some solo guests come with a book and headphones—a sign that says, 'please give me what I order and allow me to have my zen moment to myself.' Some come with their phone and lots of eye contact. They are asking for engagement and want to learn about what we do, and why, and even how," says Lipp. USC, open since 1985, has a reputation for celebrating solo diners and includes that as part of their teaching philosophy for all

Payment

Call and receive your check here and bring it up to the cashier for payment.

Hiden no Tare

Classic Tonkotsu Soup

Payment

FYI

We are a no tipping establishment.

Flavor Concentration in progress, please be quiet and silence your phone.

CAUTION: Our specially crafted bowl & ramen are extremely HOT!

ICHIRAN is not responsible for lost or stolen items.

Tax excluded in price.

EMPLO
ONLY

new hires. “These guests decided to join us, despite their lack of a companion. That tells us something about who they are and how they view us. That’s a gift we embrace wholeheartedly.”

MUSIC

Fast-casual might be the king of solo dining, and Chipotle’s music makes it not only a place to eat a quick meal, but to imbibe in the latest hits; this burrito behemoth puts serious effort into their playlists Chipotle’s music director, Chris Golub, says, “Music is not only a critical component to the vibe of a dining room, it affects how a guest experiences his or her food while dining in that environment. This group of guests is constantly in my mind when piecing together the program that plays in Chipotle throughout the world. I know when I’m eating solo, I try not to bring up my phone and get lost in the ether that is the Internet. Personally, I want to engage all senses while dining and music is a super big part of that engagement, especially when solo!” But is there an exact formula to soothe someone eating alone, in the way in which Brian Eno reimagined airport music? “I never limit what I program to a certain genre, album or artist. To me, what I think resonates most to the solo diner is engagement,” says Golub. “A balance of known beats that are in a new package work super well. Songs that inspire, are upbeat, unexpected and fit with the surroundings (especially the elements and architecture of the building) work extremely well.”

IN TRANSIT

Self-driving cars are here and hopefully the way forward for Americans who find themselves in the fast-growing “extreme commute” (90-plus minutes) to work each day. We checked in with California-based industrial designer Michael DiTullo to see how autonomous vehicles could become a dining excursion for one. DiTullo, who has designed everything from cars to sneakers, recently sparked a debate around self-driving cars for the industrial design website Core77, so we asked him to extrapolate on his ideas for mobile dining. He starts with the food itself: “Driving can be a bumpy affair. I can’t imagine trying to eat piping-hot soup in Los Angeles traffic. I do imagine really creative uses for gourmet finger foods and drinkables.” Looking for breakfast on the way to work, or dinner on the way home? In the future, your autonomous car could provide a meal, with or without a chef there to prepare it for you. “The car could have a killer version of a hotel mini bar, or I’ll be able to make my own food—the variable will be cost,” he says. “Getting a car with a pay-to-play mini bar is going to have a different per-mile cost than one that shows up with Mario Batali in it, ready to whip up some fresh pasta.” And finally, how do we avoid feeling so alone? “There could be a connection to other mobile diners. Imagine a full-sized screen completing the other side of the dining car’s table, so it appears as if you were facing another diner in transit.”

*Special thanks to Donna (designed by Home Studios) and Ichiran.*

# FORGING THE FUTURE OF THE THALI

TEXT BY

PHOTOGRAPHY BY

SEETAL SOLANKI
COREY OLSEN

Traditionally in India, tableware made out of mud is considered to have unclean properties. Ceramics, porcelain and china all fall under this large umbrella of mud-related materials derived from the earth's surface.

This unspoken rule comes from an adage my grandmother would often remind us of: no matter how well you scrub or soap them, these materials are not easily cleaned—especially when used with colorful Indian spices. Turmeric stains, in particular, which seem to make themselves known on every single mug I drink my morning turmeric tea from, remind me of this adage. Time I switched to a metal cup perhaps?

Thalis and metal tableware have been used since the Indus Valley Civilisation, dating back to 3500–2500 BCE. The long-standing tradition of metallic tableware is something that is inherent to Indian culture and for good reason—India is one of the largest producers of steel in the world. Ancient India had not perfected blown glass, and the porosity of pottery technology was unsuitable for storing wet foods—think curries that have been simmering for hours to create the deepest depths of flavor—not to mention cumbersome to clean. Forged, annealed metal, on the other hand, is suitable to hold these wet foods: stainless steel is a great conductor of heat, lightweight, durable and fully recyclable thus retaining its scrap value. Moreover, steel is more hygienic than its wood or plastic counterparts because its surface is impenetrable and uniform in texture.

Stainless steel contains iron, chromium and nickel. The alloyed nature of stainless steel, and in particular its 10.5% of chromium, provides a self-healing feature. When steel is exposed to air or water, a chemical reaction creates an ultrathin layer of chromium oxide, allowing the steel to "heal" itself. If stainless steel is scratched or damaged, this self-healing process allows the metal to regain its resistance to corrosion once more, extending the lifecycle of the material and the reuse of the thali plate. In fact, the surface will always remain as bright and shiny as the day you bought it. Alchemy at its best.

The alloyed nature of stainless steel, and in particular its 10.5% of chromium, provides a self-healing feature.

Although small amounts of these metals may find their way into your food, they won't affect its taste. Thus, we can savor every moment of our food without any metals disrupting our tastebuds. Besides, small doses of metal are essential for human wellness. Iron is an essential nutrient, a little chromium is also needed (50–200 micrograms is the acceptable range; you get at most 45 micrograms in one meal cooked in stainless steel and a lot less than that from a plate), and the amount of nickel in stainless steel is not enough to make anyone sick. The balanced amount of nourishment from a non-food variety of materials, in fact, enhances our palate and experience at the dinner table.

The rituals of eating with such styles of tableware reach far and wide. Using hands in lieu of cutlery is a skill—especially when eating fine grains of rice mixed with a lentil soup. Mounds of rice are built up with the tips of the fingers to form a sort of mountain-like structure which is then picked up and fed into the mouth. The physical act of this seems to create a deeper connection between food and the fed and is perhaps more ergonomic to the sensory palate.

Thali compartments contain proteins from soupy lentils, carbohydrates from rice or chapatis (Indian flatbread), dairy from the yogurt or lassi, and vegetables from the spicy flavorsome curries. The smallest compartments contain the fats and sugars from those ever so sugary Indian sweets. The system and order of eating these foods have been established thousands of years ago in the Vedas—sacred texts that address ritual, ceremony and philosophy—and would start with those sweets. The sugar helps break down the rest of the meal and might be a familiar practice within an Ayurvedic diet. The next stage would be to move onto the curries with the bread, rice with the spicy lentil soup and then the yogurt to line the stomach with a probiotic finish to the meal.

The thali plate can be likened to other cultural modes of eating—like the compartmentalized Japanese bento box—that create a wonderfully balanced meal with visual markers for different food groups.

The thali plate can be likened to other cultural modes of eating—like the compartmentalized Japanese bento box—that create a wonderfully balanced meal with visual markers for different food groups. This style of tableware also exists within institutional environments, such as hospitals, schools and prisons, where food is organized in service to presenting a balanced meal inclusive of all the food groups. Microwavable meals and TV dinners also encourage this style of compartmentalized food and dining experience, perhaps in a bid to reinforce the idea that a complete meal can be served after less than four minutes in a microwave.

In London, the act of washing hands after a meal—be it a microwave dinner or otherwise—is often under a tap of gushing water. However, with most Indian cultures, washing your hands over the thali plate using leftover water from your metal cup is part of the dining ritual. Water is a commodity, and an increasingly scarce one. The act of washing up with leftover drinking water is far more conscious to reserving and reducing waste water after a meal. Not to mention that it also makes cleaning dishes a whole lot easier.

The materials, the rituals and the balanced meal all work in tandem creating a closed-loop system. The thali as the tableware of the future is not such a bad idea after all.

# DANDELION COFFEE, AND WAR

# CANNED MUTTON,

TEXT BY

JONAH GOODMAN

PHOTOGRAPHY BY

JAMES MOLLISON

Life in Yugoslavia was not like life in the rest of the Eastern Bloc. For decades, the socialist state secured its prosperity by playing Cold War powers against each other—courting aid, trade and loans from both sides.

Yugoslavs took foreign holidays, watched color televisions and ate imported fruit in modern apartments.

It was communism with luxury—the best of both worlds—but it was all kept afloat by foreign debt, and within two years of the fall of the Berlin Wall, a quarter of the workforce lost their jobs, while almost as many again went unpaid. With bewildering speed, faith in the state collapsed and violent, nationalist movements sprang up, splitting Yugoslavia by ethnicity and religion. In 1992, as the country crumbled into civil war, Serb nationalist forces attacked Sarajevo, the small, diverse capital of Yugoslavia's Bosnian republic that stretches along eight miles of shallow river in a steep mountain valley. Too weak to take the city, they cut off its water, gas and electricity, barricaded the roads and trained their guns on its population of 400,000 citizens. The siege would last for almost four years.

"When the first barricades went up, we didn't know where to go, or what to do," remembers Sevala Mrndzic, then a mother to two young children. "We tried to collect weapons and organize with neighbors to protect our homes, and people started getting food, grabbing everything inside the supermarket." Routines were formed around the new constraints. When the taps stopped working in an apartment, people visited their neighbors on the floors below to see what was left in the system. When a building ran dry, they would follow the water downhill, to houses closer to the river, or to the city's historic wells. Queuing for water became a daily duty, as did hauling full containers back home.

As winter came, the cold crept in. Families burned books and boots to keep warm, prising up parquet floors to feed tin-can stoves. Most households moved into their safest room and slept, ate and cooked

TOP
Thermos. Glass decanter wrapped in polystyrene foam, cardboard and packing tape.

BOTTOM
Periscope. Handmade wooden tool built by members of the Bosnian army.

there, abandoning the fridges and electric ovens made useless by the lack of power. These new, makeshift kitchens became the center of life in besieged Sarajevo.

Sejda Dedovic lived with her husband in an apartment 100 meters from the front line. "A sniper was close by, so it was dangerous to go in and out. I knew that he could see me in any of the rooms—wherever I went in our home." The authorities offered Sejda the option to move further inside the city, but she chose to stay, determined not to let strangers force her out. "My sense of dignity kept me alive," she says.

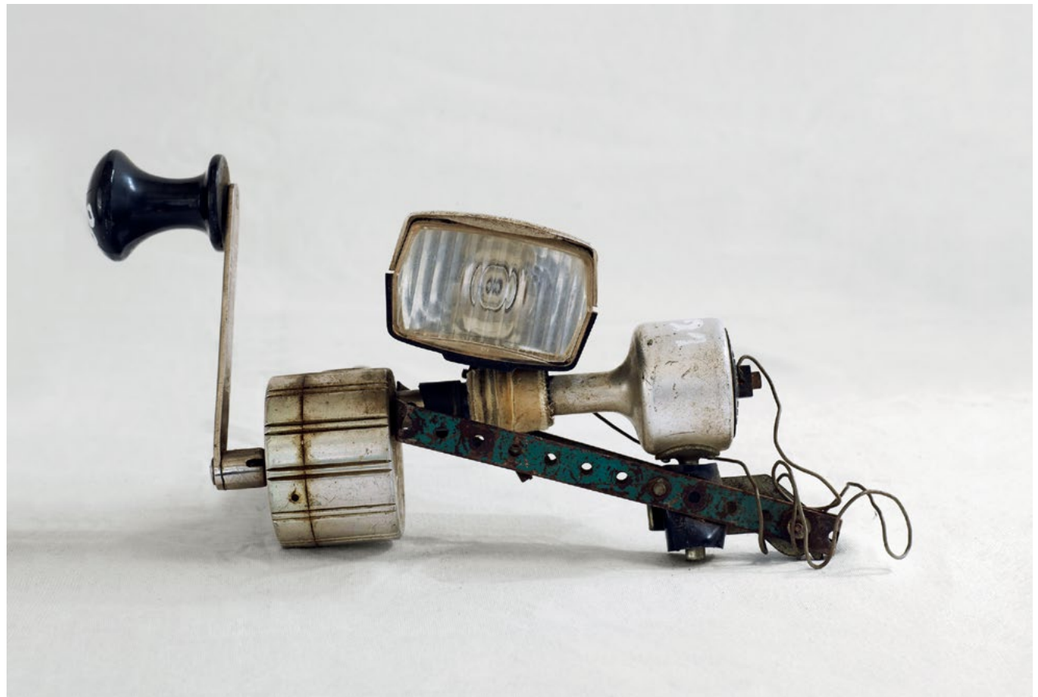
Sejda arranged pots to collect rainwater during the day and waited for nightfall, when she would go out for supplies and firewood, scavenging from the broken hulk of a neighboring building that was regularly shelled. In the first months of the war, her husband brought home an improvised oven, made by his friends. Under-siege Sarajevans settled on two core designs for solid-fuel cookers. Most common was the *sarajevska konserva*, a stove made entirely from the cans in which humanitarian aid arrived. The other was the *fijaker*, a low, solid-looking but surprisingly light stove with a small oven and a chimney pipe. When Sejda's husband arrived with a *fijaker*, they installed it in their short, narrow corridor, the safest place in the apartment.

Once or twice a fortnight, Sejda, Sevala and other Sarajevans queued for handouts of humanitarian aid, including flour, oil, rice and canned goods. "I had never had food like that before," remembers Sevala. "God knows how long it had been standing in some depot. Even the rice smelled old. Kind of yeasty. Imagine if you put cake in a box, and how that smells after a month. Imagine how it would smell after two years. The things we'd get didn't taste salty or sugary. You couldn't place them."

Nothing was fresh, and everything came in bags or tins; herring in soya oil from Canada, spray dried full cream milk powder from Australia, canned mutton from Islamic Relief, instant yeast from Turkey and US army surplus crackers in mud-colored packaging. Sometimes there would be rice, but no flour. Sometimes flour, but no rice.

"Before the war, we had everything we wanted," says Mediha Jabucar, an elegant woman who continued her work in social care throughout the conflict. "And when the siege started we just wanted to pretend that everything was still normal, that we were still the same and that we ate the same food. We tried to deal with the problems around us as if they were nothing out of the ordinary. So we invented things. We fantasized."

Bosnian coffee, unfiltered and gently boiled, is the central social ritual of Sarajevo life. During the war, real coffee was only available on the black market. A single kilogram sold for up to 150 Deutschmarks, equivalent to US$390 today. For most Sarajevans, real coffee was completely unaffordable, so they drank a range of coffee substitutes related to where they lived and who they knew. Sevala made coffee by toasting uncooked rice on a stove, then grinding it. Mediha did the same with lentils. Sejda uprooted dandelions and roasted them in her oven for her husband and soldiers that were passing through. "It was dangerous to go and pick dandelions," says Sejda, shaken by the memory. "You had to be quick because of the snipers, so you'd take



CLOCKWISE FROM TOP
Utility Cart for transporting water.
Salvaged soft drink crate and rollerskate wheels.
Hand Lamp. Bicycle parts, coffee grinder handle.
Watering Can. USAid oil tin.

whatever plants were closest to you and get back inside, fast."

These were the Serb nationalist snipers that shot elderly women, young children and babies indiscriminately, in broad daylight. What possesses someone to run out in front of those gunmen, just to pull a weed from the grass? To use precious water to wash it, precious fuel to bake it, and more fuel to make a small drink with no nutritional value or stimulant effect?

On a summer's day in Sarajevo, Sejda showed me how to find and uproot dandelions, how to peel and chop them, and together we had a cup of dandelion coffee. It was slightly darker than real coffee, with the same foam on top and a similar soft bitterness on the tongue. It looked like the real thing, and though it smelled and tasted different, it felt like the real thing, too. More than the coffee itself, the grinding and pouring and waiting for the sediment to settle conjured a moment gained and out of time. Holding the small fildžan cup in one hand, I could imagine how a bitter weed could be made into a thing of pride, and scrabbling in the grass might be an act of defiance.

Mediha drank her daily coffee at work, in a small office where she and 14 colleagues squeezed around a tin-can stove every morning to swap recipes. "We would discuss the things we had cooked the previous evening, dictate recipes to each other and write them down," says Mediha. Rather than original creations, the "war recipes" Mediha and her colleagues collected were efforts to recreate food they enjoyed in peacetime, such as mayonnaise made from flour and milk powder, cheeseless cheese pies filled with overcooked rice, and approximations of regional branded products such as Eurocrem spread and the condiment Vegeta. Because supplies would differ from week to week, they had to constantly reinvent ways to replicate the past, and Mediha's book records multiple methods of making the same thing: five types of mayonnaise; three kinds of Eurocrem.

"I knew I could never get close to the taste," says Mediha. "But I wanted to get the shape and consistency, because when you eat together, the way you serve food is important."

"Everyone was sharing recipes," says Mediha. "Neighbors were always together, in each others' kitchens, exchanging information." Revelations could spring from nowhere. When Sejda mentioned to her visiting sister that she missed having bicarbonate of soda to raise cakes and bread, she learned that she could find it in her fire extinguisher. "It was so important to survive," says Mediha. "But it was even more important to survive with your family and friends, and that forced us to do new things and experiment." Mehida remembers an erstaz strudel recipe created for a retirement party, and little egg powder cakes at a wartime wedding. During the siege, Sejda celebrated Eid al-Fitr every year by making baklava. It was never true baklava, and it took two days to find the ingredients to make it, but eating it with her family and neighbors was "the most important feeling" for her.

Confronted by the stark need to survive, Sarajevans knew better than anyone that food was not just fuel. Instead, each household guarded a spark of humanity around the glimmering hub of an oven or stove. Cooking, improvising and maintaining food rituals became a daily act of creation, a way to assert their existence against a backdrop of random violence.



ENTO

EATING TOOLS

INTRODUCTION BY

CHARLOTTE PAYNE

PHOTOGRAPHY BY

COREY OLSEN

STYLED BY

MEGAN KIANTOS

*The mist amongst the mountains evokes brush and ink on a faded scroll; a scattered nostalgia of wooden houses rise to greet you. You're in Japan, and you're here to sample a unique rural delicacy.*

*Your host is a retired bus driver. His tired eyes gleam with youth as he tells you, "We've saved a nest for you, 'specially. A big one. Gonna be about 7 kilos, I reckon, maybe more. Best of the season!"*

*Your fear mirrors his excitement, for he's describing the nest of the most lethal creature in the country —the Asian giant hornet.*

*Two hours later, swimming in sweat and drained of all emotion, you peel off your protective clothing and survey the teeming nest of hornets you've extracted from their earthen home. The wife of your host welcomes you with a grin and a giggle and holds out a glass of hornet liquor as a peace offering.*

*Your work begins. The three of you sit on the tatami mats that frame their tiny table, using large tweezers to pull each and every hornet out of the nest. Neighbors drop by and join you. The hornets are eaten and enjoyed, shared between those who know how delicious they are, and how difficult they are to obtain.*

*Insects are eaten worldwide. They are harvested from wild or cultivated landscapes, with the notable exception of the silkworm, which has been farmed for thousands of years. As a cuisine, they are exciting to explore, with great variation in taste and methods of preparation. And, when edible insects are abundant, they are celebrated.*

*But how are they harvested, prepared and eaten? Humans have an extensive and diverse history of eating insects, a habit we share with our primate cousins. They, like us, use tools. Termites are 'fished' out of their mounds by East African chimpanzees using modified branches in the same way as many human collectors. They are then eaten raw or cooked. Before you start squirming in your seat, please take note: termites are delicious. They are eaten not out of hunger but out of appreciation of this deliciousness.*

Over 10,000 years ago, humans began doing something no chimpanzee has ever been known to attempt—we began to farm plant crops on a large scale. Rice, maize and other grains remain dietary staples, and each has a unique suite of insect pests. More importantly, each of these crops has at least one exceptionally delicious insect pest, harvested for food and, in many cases, sold at a higher price than its associated crop. One widespread example is the 'rice hopper', caught in large nets in Southeast Asian rice fields and cooked in a sweet soy sauce. Another is the popular Oaxacan snack, chapulines: these pests of maize and alfalfa are usually cooked with chili and lemon. In both cases, the pest is often eaten with the crop, with rice hoppers sprinkled on rice, and chapulines served in a maize tortilla. These insects are only found in pesticide-free fields, so their consumption may also help the environment.

In fields such as these, how are insects collected? In my experience, edible insect harvests often involve waking early and using whatever you have on hand to gather as much as you can. And how early? 2 AM is the earliest I've been asked to meet someone to harvest insects. Why do I describe the tools for collection as 'whatever you have on hand'? Because those who collect insects are usually rural dwellers who know how to make the best use of what they have, and their chosen tools reflect this. For example, to collect caterpillars from agroforestry fields in West Africa, or to sweep through maize and alfalfa fields in Mexico in search of grasshoppers, the most common tool used is a large plastic bucket. Often, the bucket proves to be too small.

As more insects are gathered, the bucket begins to get heavy...and the collector must return to the house, grab another container —anything will do—and keep going!

For dangerous insects such as wasps and hornets, the story changes a little. Protective clothing is needed, which may be fashioned haphazardly from plastic sheeting, wire netting, and even in one case, a tin box. Carefully chosen tools are also needed, for nest extraction. Hornet collectors often have a set of scythes, secateurs and shovels prepared beforehand, while wasp collectors fashion their own wooden boxes, of multiple sizes, in which to place the nest.

So can we, as inexperienced but interested insect consumers, be a part of these practices? I'd argue very strongly that we can. Many of those who harvest insects do so with joy but are strongly aware that theirs is a dying tradition. Learning more about the rich and diverse practices that accompany the collection and preparation of insects, and taking part in these practices wherever possible, is one way in which we can support farmers and producers of edible insects and understand more about the food we are consuming.

As with any food culture touted as a sustainable alternative to our current system, we will benefit most if we engage with and understand its origins, the tools and rituals that are integral to traditional insect gastronomy.

# USA/TOGO: TIJEGGA

# TERMITES

MANSOUR OURASANAH, WOODEN TRAY AND SPOON CNCED BY NODUS

Tchamba, the village where I was born, is also the place where I first ate insects, flying termites specifically. To be frank, I don't remember a time when I didn't eat insects. It wasn't something you decided to do; it was food you ate whenever it was available. It was as much a normal part of growing up in Tchamba as learning to climb a mango tree or play soccer. It was as much a viable source of nutrition as farming corn and yam, or hunting for rodents.

The difference between eating flying termites and other foods, however, is that it had the solemn quality of a ritual. We hold dear the things that come sporadically into our lives and shape our character and in Tchamba, flying termites only came once a year and are one of the pillars of the Tchamba's mettle. Seeing the first signs of rain after the dry season had faded away, stirred in children the same type of excitement reserved for a brand new soccer ball. Once the first droplets of water hit the ground, children anxiously waited for the torrential rain to drench the soil and flood the termite mounds on the village's outskirts. Then, magically, like alchemy, the mounds turned into mud and expelled the winged termites into the village.

In search of bright light sources, the insects first appeared in small numbers—1, 2, 3, then 10, 20, until, quickly, the villagers found themselves drowning in swarms of hundreds of winged insects smashing into people's faces, windows and into lightbulbs. The first night of the swarm was when the shriek-filled harvest happened. Armed with bowls of water and palm leaf fans, armies of screaming children ignored their chores and homework and spent the whole night swatting the insects down into the bowls until the swarm had completely disappeared.

The next day, the dead insects were collected out of the water, un-winged, dried, salted and fried by the adults over a billowing charcoal furnace. A pinch of pepper here and there, and suddenly one had one of the most delicious meals in Tchamba. When eating the termites, children sat together around a giant bowl and ate with their hands until all that was left were speckles of salt and pepper in the bowl and on their fingers. Then they waited another year for the next harvest.

As an adult, and away from the village, this ritual has become one of my most enduring childhood memories because it's shaped my appreciation for food, any food, as a gift from nature. Not only did termites provide us with sustenance back then, but they also brought children, adults and nature together because of our shared experience. Therefore, I wanted to design a set of tools that would honor this ritual for people like me who are now adults, but find themselves yearning for the good old days when a bowl of fried termites was the highlight of the day. To do this, I felt compelled to create a visual and tangible experience that would merge the natural with the artificial and unite people whenever those two characteristics came together. The wooden platter pays homage to the rudimentary elements used in the harvesting and drying of the flying termites and serves as a pedestal that cradles a ceramic bowl. The termites are eaten by hand out of the smooth, organic depression in the platter, while the ceramic bowl contains a complementary food (typically rice or a starch) or toothsome additives like salt and pepper. The shape of the bowl is a modern interpretation of the minimalist casseroles used to drown, fry and store the termites. The contrast between the wooden pieces and the ceramic bowl provides a balanced experience that is at the heart of a ritual that brings people together by encouraging them to sit together and eat with their hands.

# BRAZIL: ANTS FLORESTRA

REBOH DESIGN AND GUSTAVO MARTINEZ

Entomophagy has a long tradition in Brazil among regional indigenous cultures, and today, these traditions are still preserved in those communities. We noticed a timid attempt to valorize these habits in upscale Brazilian cuisine, but didn't see many new dishes or preparations developed from these experiments as a result.

We chose to create utensils for *farofa da içá*, which has a strong connection with the pillars of Brazilian cuisine. *Farofa* is toasted cassava flour, frequently paired with spices or *formiga içá*, an ant also known as Brazilian caviar. Our serving dish brings nature to the table as expressed through the piece's shape, function, materials, aesthetics, textures, touch and colors.

It was important for us to create an associative environment to evoke a familiarity between the person and the dish, which at the same time would dispel the strangeness of eating insects. To this extent, we sought playful forms that evoked the forest, botany, organic shapes and the world of ants (*içás* are cutter ants that build subterranean ant hills). We also thought about what circumstances might create a future in which we eat more insects: would we have less access to industrial materials? We decided to use natural, local materials such as clay, *taquara* (Brazilian bamboo), wood branches and porcelain. This means the utensil can be produced through artisanal or semi-industrial processes. Despite the materials, *Florestra* is an object that fits into many environments, from high-end luxury restaurants with sophisticated gastronomy to bars and pubs, or even your very own dinner table.

# VIETNAM: SILK WORMS SPORK

TAMMY AND EMILY NGUYEN

Living in Ho Chi Minh City, I would often head to Maximart to grab lunch. The lunch counter of this large grocery chain is a destination where office workers can pick from a variety of entrees such as slow-cooked pork or fried fish, served over a bed of rice with a side of soup. For me, the go-to lunch entree was silkworms sautéed in tumeric and other herbs.

As a Vietnamese American, the irony in this lunch is clear. On the one hand, eating silkworms for lunch is mundane, casual and mainstream. On the other hand, I was eating worms, something that has been characterized in my American upbringing as gross.

Silkworms are fat and smooth. When considering different ways of enjoying their unique gastronomic qualities, some might eat them delicately with a toothpick. Some might eat them by the spoonful, their creamy insides oozing in the mouth. Alternatively, some might mush and spread the worms around until they look like liverwurst.

For MOLD, I wanted to create a futurist tool for eating worms. My own artwork draws from the history, myths and politics of Southeast Asia. I invited my sister Emily, an architect, to collaborate. Working from a narrative about eating silkworms for lunch, we talked about the weight of the materials, and the possibilities of an ambidextrous tool that could be used from both sides to experience different ways of eating. Considering these eating options, we designed a "spork" where one could pick at the silkworms from the pronged end or spread and spoon them with the other end.

In Vietnam, food and drinks are often sold in little plastic bags that end up littering the streets. Thinking about sustainability and the future, we also proposed an edible algae-based bag that could be used for vending food, but also dissolved in hot water—after the worms have been eaten—to create a delicious pho broth the next day.

# ITALY: MAGGOTS
# SIMBIOSI

PRETZIADA

If you've ever lived with a Sardinian man, you might roll your eyes when you hear the words "pocket knife." This object occupies a special category of personal property for Sardinians. Traditionally, pocket knives accompany their male owners throughout the day and are used in the countryside by farmers and shepherds in myriad ways. They are also brought out during meal times to eat with. Just as I might graciously loan you a sweater if you're over at my house for dinner, a Sardinian might lend male guests an arresòja for their evening meal if they haven't brought their own.

The same people who will always have a knife in their pocket almost invariably eat casu marciu (also known as casu marzu, casu frazigu, casu modde and more). Both elements are part of a strong rural culture that is waning with each passing year. Casu marciu, translated as "rotten cheese," is the increasingly well-known Sardinian cheese containing live maggots. More a process than an actual type of cheese, it is created when the cheese skipper fly (Piophila casei) arrives with the summer heat and lays its eggs in a wheel of hard, pecorino-style sheep's milk cheese. The fly's larvae then hatch and begin to eat the cheese from the inside. Their digestion creates a pungent, creamy, fermented, "rotten" wheel of casu marciu.

Casu marciu has a common, strange physiological effect on the eater. Bluntly said, the cheese makes you flush, and then sweat. It is best accompanied (i.e. countered) by a strong glass of Sardinian red wine. The smell is so strong that it fills an entire room and stays on your skin long after washing. Even if you've had only one taste, the flavor remains in your mouth and throat for hours afterwards, even if you've eaten other foods in the meantime.

Casu marciu is a rustic cheese from a rustic territory and, as such, the utensils needed to consume it are quite simple. After all, the fly larvae does all the prep work. One needs only a board to set it on and a knife to cut it open.

The cutting board was simple: we wanted it to be as plain as possible from the outside but, like casu marciu, surprising on the inside. Sardinia has a long history of intaglio wood carving and we found an artisan in a nearby town to transform the inside of the cutting board into a serving plate decorated with traditional Sardinian patterns.

The knife, however, raised many questions. There are infinite models on the island, the most famous of which is the pattada, a slender, sharply pointed knife made in the town from which it gets its name. We decided to work with the *sulcitana*, both because its broader, rounder blade works better for spreading cheese, and because we are fiercely proud of our overlooked little corner of the island, Sulcis.

Just as the shape of the *pattada* is based on the myrtle leaf, the shape of our knife, crafted by Sergio Frongia, is an ode to the slender and shapely wings of the cheese skipper fly. The knife's handle is made from aged Juniper beams, hinged with hand-molded brass, and lined with black carbon fiber. The blade is a wickedly sharp, hand-forged steel. The end product is a knife that may not look typically Sardinian at first glance, but that—in its construction and choice of materials—is earnestly local.

# SOUTH AFRICA: MOPANE WORMS

COUNTERSPACE

In Johannesburg, we live and work in a context where much of our surroundings are designed on knowledge gleaned from elsewhere, not inspired from here. Counterspace's research often focuses on the ways in which the rituals and practices of our city can begin to inspire new design forms. Our studio explores how we can design for the specificities, beliefs, myths, ways and lives of the people of Johannesburg. In South Africa, we have many traditional cutlery and utensil forms inspired by the ways people prepare, sell and eat food—communally and individually.

Mopane worms are harvested in the wild from the mopane trees that grow in southern Africa. Anyone is allowed to harvest worms and no one owns the trees or the worms living in them. The mopane worm trade in South Africa generates close to $40 million (R516 million) a year, but the average worker receives only $3/kg for the worms they collect.

The worms are traditionally harvested by women and can account for a significant portion of a rural family's dietary protein. Individual harvesters can collect up to 50 kg of worms a day. Accordingly, harvesting, cleaning and drying mopane worms provides a viable income source for many people living in rural areas.

The traditional method of cleaning mopane worms involves squeezing them like a tube of toothpaste to remove their innards. This is done one worm at a time. When handled, the live worms secrete a slippery liquid that coats the harvesters hands, making the cleaning process even more complicated.

For this exercise, we experimented with giving form to something new, inspired from an age-old practice and delicacy. Counterspace has created a utensil design that allows for multiple worms to be cleaned at one time, reducing the mess that complicates the cleaning process. It is meant to be operated with one hand, further streamlining the process.

*3D Printing by BlueEdge.*

PRODUCT
PROJECT NOURISHED ON DINING IN VIRTUAL REALITY

# EAT WITHOUT REGRET

TEXT BY
RAY HU

ILLUSTRATION BY
ANDY ROLFES

Someday soon, you might be able to have your cake and eat it too—or at least a virtual simulacra of it. Such is the premise of Project Nourished, a multi-pronged investigation into the as-yet-uncharted territory of computational gastronomy. The ambitious food-design undertaking has yet to fully live up to the promise of its seminal viral video, in which a woman takes a seat at a table only to reach past her place setting to don a futuristic, all-white headset resembling a pixelated cartoon cloud. The voiceover invites the viewer to "imagine you can eat anything you want without regret."

It's not a purely epicurean thought experiment: simulating sugary or fattening foodstuffs speaks not only to guilty pleasures but also to dietary issues such as diabetes and obesity. But seeing as there's no recipe for what a virtual meal might entail, there are still several steps between 3D-printing hydrocolloid nutrient cubes and the sci-fi imagery in the project video.

In the meantime, Project Nourished founder Jinsoo An proposes, "the uncoupling of the physical attributes that prevent food from being more than what it is today. Motion, color and interaction could be mediated by a computer...to reverse-engineer human senses and cognition related to the perception and consumption of food to enhance and diversify methods of eating." Since launching, the entrepreneurial experience designer has recruited some 30 collaborators in his effort, positioning Project Nourished as a proponent of computational gastronomy.

To that end, Project Nourished has taken a proverbial spaghetti-on-the-wall approach—except that the wall is a moving target in a speculative environment. In fact, An identifies at least two other research areas in addition to algorithmic gastronomy, think IBM's Chef Watson, and VR food experiences: deglutition-free diet and autonomous gastronomy. The former concerns chewing and swallowing—specifically eliminating the need to do so—either as a solution for those who are unable, or simply to achieve a "more aesthetic way of experiencing [food]." The latter addresses robotics as assistive devices for food consumption.

But the full-fledged virtual experience remains the holy grail for Project Nourished, a substantial departure from the academic conceit of data-crunching flavor combinations and ingredient networks to fine-tune recipes. The woman in white's experience in the video was merely an amuse-bouche for what An has taken to calling hypergastronomy, in which taste, texture, appearance and nutritional value can be designed from scratch.

Since the user experience remains vague, An and his team rely on visuals to, in his words, "convey the message that this is something very different and very futuristic, and actually quite attainable at the same time." The result is a suite of conceptual hardware devices, rendered in a highly stylized design language: a headset, an aromatic diffuser, a gyroscopic utensil, and a bone conduction transducer, which collectively trick the user's senses into tasting steak, apple pie, sushi—you name it.

The design itself is willfully abstract: the all-white, faceted objects look like fragments of a digital iceberg. The "low-poly" look may not be to everyone's taste, but An considered the backlash against existing VR and AR hardware like Google Glass and set out to create something sculptural inspired by architecture, art and science. The bigger problem for hypergastronomy, of course, is a classic case of the chicken and the egg. If An is tightlipped about the future of Project Nourished, he concedes that much of what they are working on may be a matter of holding out for VR to catch on.

For now, we can only revisit An's elevator pitch, a childhood memory that he cites as his initial inspiration for Project Nourished: A scene in the 1991 film *Hook*, in which Robin Williams' Peter Pan conjures a banquet by using his imagination.

PRODUCT STUDIO TINKAH

# A NOMADIC FEAST EMBRACES TABLEWARE WITHOUT THE TABLE

TEXT BY DINA MAHMOUD

The Arabian Peninsula was once composed of several small tribal villages, the majority of whose people spent summers pearl diving and winters inland in the desert. The Bedouin tribes that made up the population were nomadic and had a unique dining culture. Much of the food had to be easily transportable while tableware and cutlery were kept to a minimum. When they settled down for a proper meal, it was usually a big family affair with everyone seated on the floor and gathered around a large platter of food. Instead of utensils, Bedouin people ate with their hands, forming rice into small balls which were then scooped into the mouth. Modern day Emiratis rarely eat like this anymore, instead favoring Western dining practices.

"Nowadays, eating on the floor is reserved for certain occasions when the extended family gathers together," explained Kholoud Sharafi, a member of the Dubai-based design practice Studio Tinkah. "This collection is a way to keep us connected to that history." The Emirati creatives proposed *Constructed Feast*, a nomadic dining concept, to bring certain elements of traditional Bedouin dining practices into a modern context.

*Constructed Feast* presents tableware without the need for a table. The forms and materials in the collection hew to tradition while the design studio experimented with scale and surfaces to modernize the objects for a contemporary context. In the collection, a *saroud*, a traditional round placemat made of woven palm leaves, is scaled up and adapted to become a large floor mat made of intersecting strips of leather and textiles. In lieu of one or two large serving platters, Studio Tinkah multiplied and scaled down platters into plates for individual use.

The team used a slip casting technique to make the pewter and clay vessels in several sizes. "Slip casting allowed us to really refine the shape of the objects and make them pretty lightweight," Sharafi told MOLD. They also incorporated sand into both the process and the finished product. This design detail draws from a traditional Bedouin cooking method, *madfoun*, meaning buried—in which food is covered in hot sand and left to cook for up to 20 hours. The tessellated surface of the vessels also echoes the weave pattern in the floor mat which serves as a base for the collection.

The attention paid to materiality was central to Studio Tinkah's design process. *Constructed Feast* was born out of a commission from the British Council in Dubai, where the brief was to create a project that drew inspiration from a local craft. Paired with a mentor, Kieren Jones, who leads the multidisciplinary design studio Faculty and is Course Leader of Material Futures at Central Saint Martins in London, the team refined the collection over the course of several months. *Constructed Feast* was exhibited in Design Days Dubai, Shanghai Design Festival and during Salone del Mobile in Milan where it was the only Emirati work shown in Ventura Lambrate for 2016. The pieces look equally at home spread out on the desert sand or as a place setting inside the glittering towers of the Burj Khalifa. By bringing together local materials, craft and practices, *Constructed Feast* preserves the threads that tie an evolving culture together.

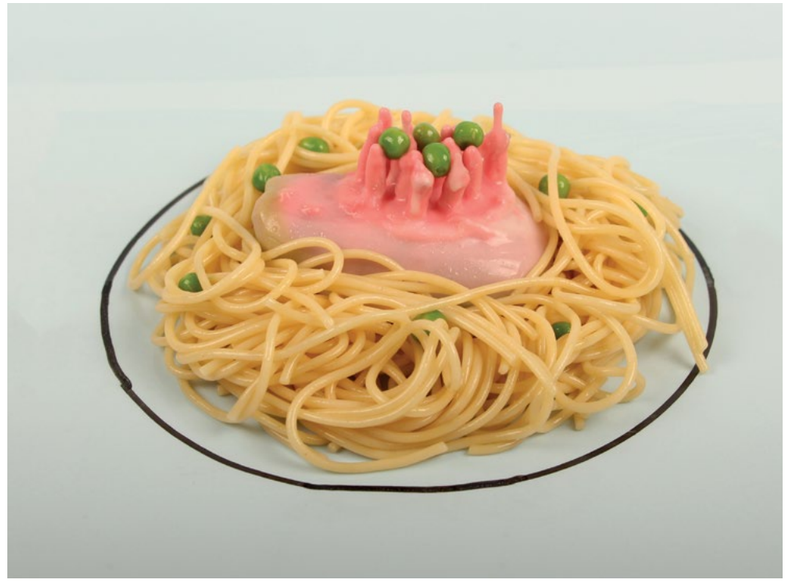
PRODUCT

## DROP A STONE IN IT

## MARIJE VOGELZANG'S *VOLUMES* ADD HEFT TO THE PLATE, NOT THE BODY

TEXT BY
NADINE BOTHA

A group of travelers arrives in a village hungry and empty-handed, begins the stone soup folk tale that dates back to the 16th century. Told across Europe, from Ukraine to Portugal, the story goes that the wary villagers are reluctant to share their food, so the travelers put a large stone in a pot full of water and put it on the fire. Curious, villagers begin to inquire about what they are cooking. A delicious soup, the travelers explain. If only they had a touch more garnish and seasoning to enhance the flavor, it would be perfect. Intrigued, villagers begin to part with a carrot here, an onion there. Soon the soup is rich and nutritious, whereupon the stone is removed, and the soup is shared with all.



While the travelers might have duped the villagers into sharing their food, all's well that ends well. This sleight of hand is also the intention behind Marije Vogelzang's *Volumes*—she hopes to trick us into eating less. Commissioned by the Museum für Kunst und Gewerbe Hamburg for the *Food Revolution 5.0* exhibition, *Volumes* is a series of peculiar-looking objects that can be added to one's plate to make it look fuller.

"We have the tendency to overeat and are visually misled by large plates and wide drinking glasses," explains the eating designer who, since 2015, has headed the Food Non Food department at Design Academy Eindhoven. "By adding Volumes to your plate, your brain will register more food than there actually is. Your stomach can't count. Your brain will tell your stomach it had enough."

As in the folk tale, the *Volumes* are, in fact, garden-variety stones, covered in food-safe heat-resistant silicone. The thermal mass of the rocks also serves to keep food warm or cold for longer, encouraging slower eating. In creating an aesthetic for these provocative food prosthetics, Vogelzang neither wanted *Volumes* to look like part of the dinnerware, nor like actual food. The choice of unusual colors and forms are in service to the illusion—the brain reads each "Volume" as distinct from the plate itself and definitively inedible once a diner consumes the food around it.

"Most of us don't overeat because we're hungry," explains the website of nutritional sociologist Brian Wansink, a pioneer of the concept of 'mindless eating' that inspired Vogelzang. "We overeat because of family and friends, packages and plates, names and numbers, labels and lights, colors and candles, shapes and smells, distractions and distances, cupboards and containers." Although the sociologist, who serves as the director of the Cornell University Food and Brand Lab, has recently come under fire for data irregularities, the current scrutiny of Wansink's work does not mean the findings are incorrect.

As the centuries-old folk tale shows, a lot of the principles of mindless eating are plain common sense. Perhaps this is where food design's significance lies: in taking the field beyond statistical analysis to creative and experiential fruition.

PRODUCT

# THE AGE OF THE ALGACULTURALISTS

## BURTON-NITTA'S SYMBIOTIC ALGAE SUITS HINT AT THE SHAPE OF OUR FUTURE DINING TOOLS

TEXT BY
SAM DUNNE

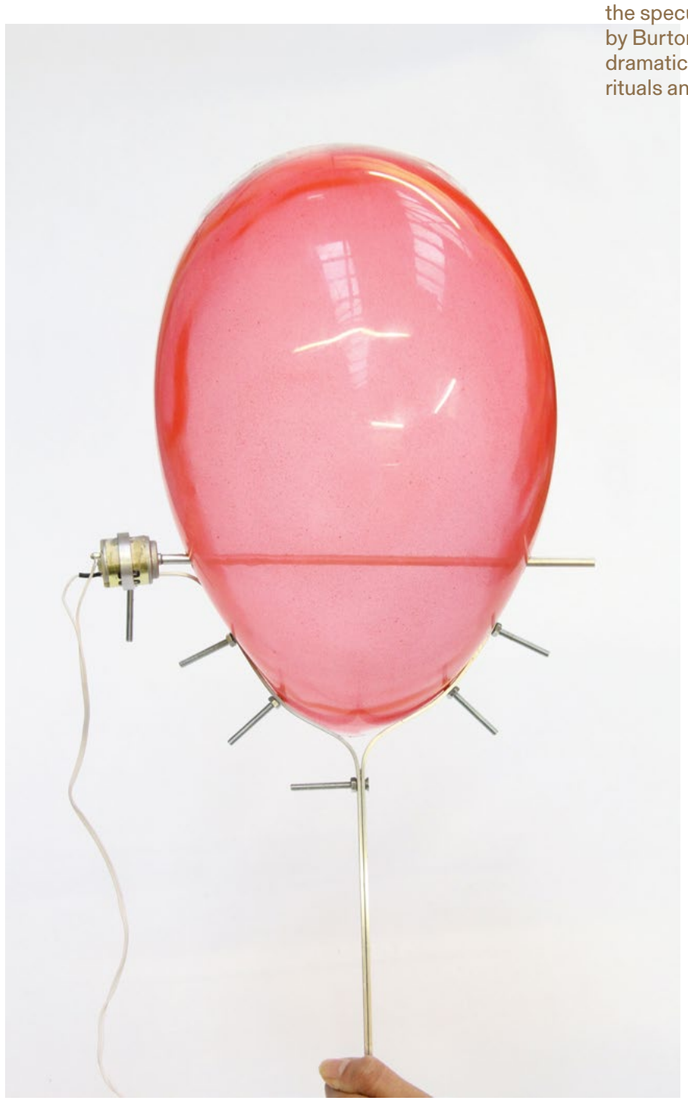
Looking beyond the horizon of this decade or even the next, the future of food and how we will eat it seems obscured by a curious paradox. On the one hand, humans possess unprecedented power to shape Nature to our appetites as science and technology deliver untold abundance, convenience and delight to the mouths of large swathes of the global population. However, our continued alimentary prosperity is simultaneously uncertain—ecological side effects of our success as a species place increasing strain on the delicate systems that sustain us. So an age-old arms race continues in the form of self-inflicted threats to human survival slowed only by our ability to interfere our way out of impending disaster.

London-based BurtonNitta is an interdisciplinary art and design studio that revels in grappling with the potential and limitations of human culinary evolution. The duo's growing body of speculative work provides a provocative glimpse of possible worlds shaped by nascent scientific discovery, often through the lens of food futures and the rituals that could arise from these design objects.

One of their earliest proposals, *Algaculture*, points to a radical departure in the way we fuel our bodies. Without dwelling too much on the likely causes for such a shift (Ecological disaster? Sustainability efforts? Plant-based eating gone mad?), the project imagines a world in which humans have developed elaborate wearable tools that allow them to live symbiotically with algae. Inspired by a *New Scientist* article on 'plantimals' (animals, both naturally occurring and genetically modified, that live in symbiosis with plants, making them 'semi-photosynthetic'), the designers Michael Burton and Michiko Nitta imagine a world where food production becomes reintegrated with daily human life. The head-mounted "Algaculture Symbiosis Suit" enables the wearer to feed the waterborne superfood with both the carbon dioxide from their own breath and sunlight—producing edible algal delights when nurtured sufficiently. The work also considers how such a food revolution would shape daily existence and includes a full-size solarium—in which the Algaculturalists would bask in nutritious sunshine—as well as audio recordings of future-fiction conversations in which people discuss where to catch the best rays and the politics of buildings blocking out precious sunlight.

Another fascinating example, *Gutscape*, proposes a future in which eating becomes as much about augmenting our brains as sustaining our bodies. Informed by growing scientific understanding of complex nerve networks that link the human gut and the central nervous system (the 'gut-brain'), the designers suggest that people might don devices—like their bizarre balloon-like "Vagus Nerve Stimulation Helmet"—to increase nerve connectivity between the gut and brain whilst dining. *Gutscape* enhances a diner's eating experience and ameliorates one's mood in a bid to cope with life's daily stresses.

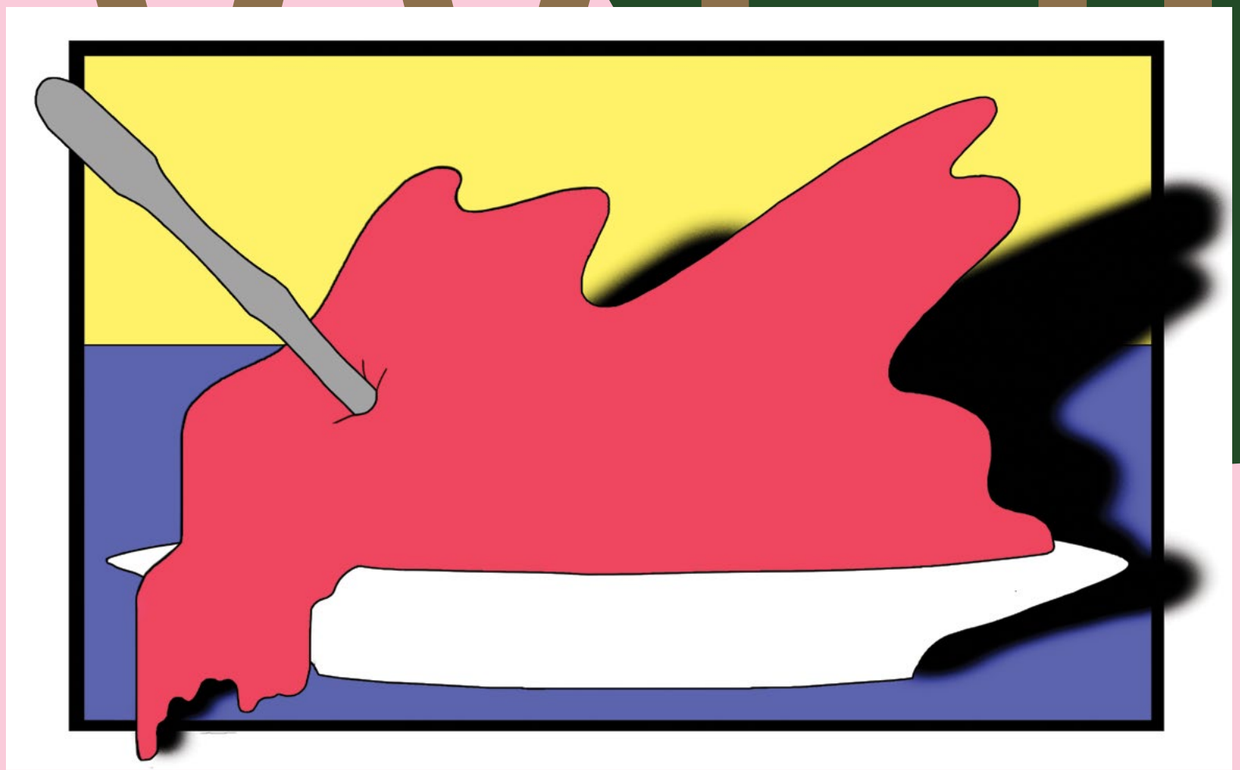
As scientific endeavor and ecological uncertainty continue to accelerate, the speculative objects created by BurtonNitta confront us with the dramatic possibilities for shifting dining rituals and our relationship with food.

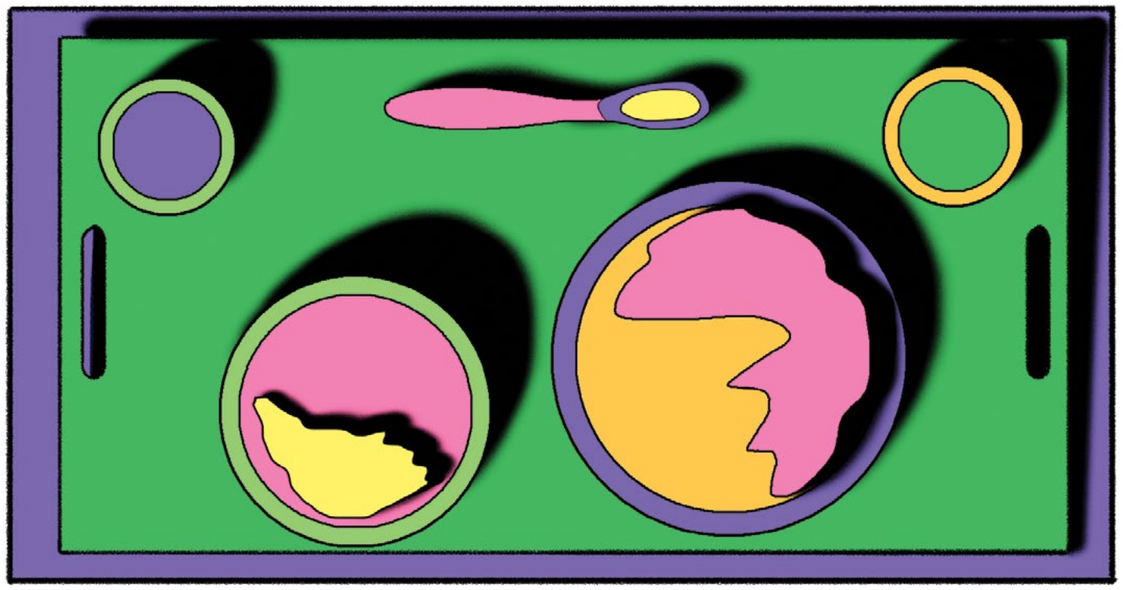


# EATING WHILE OLD

## How Design Can Change the Dining Experience for the World's Rapidly Aging Population

Text by
Jennifer Krichels
Art by
Cynthia Alfonso

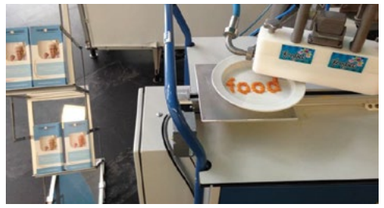




Ben Davies wears stylish eyeglasses. “I don’t want them to change when I get older!” the 43-year-old managing director of the United Kingdom-based consumer product design agency Rodd says of their style. It’s a sentiment shared by many design-savvy thinkers as they consider the experience of aging and its effect on their carefully honed aesthetics and lifestyles. “Think of the coolest old person you know: Mick Jagger is not going to settle for some shitty zimmer frame,” jokes Davies. Rodd is one of a growing number of design firms tackling what it means to consider an aging population in its design work. One new project with a “smart wearables” company involves finding a dignified solution to monitoring the location of older loved ones using Bluetooth technology. “It’s quite nice to do this type of future aging product you can imagine that you would want in 20 years,” says Davies.

Rodd’s first foray into aging-centric design came when Design Council, the charity organization that acts as the UK’s government adviser on design, launched a design challenge called Living Well With Dementia in 2011. The Council invited Rodd to take part in the challenge, and the firm began to analyze some sobering statistics surrounding the UK’s rapidly-aging population. One statistic that stood out was that nearly one-third of elderly people in professional care settings are malnourished—attributable to a variety of factors like depression and the loss of chewing and swallowing abilities that cause a loss of interest in eating. Recipients of meal-delivery services and residents of elder care homes often have no connection with food preparation at all, an activity they may have loved in younger years. In turn, severe weight loss can weaken the immune system and increase the risk of falling, setting off a chain reaction that can quickly deprive an elderly person of any remaining independence.

To develop a solution, Rodd partnered with olfactory consultant Lizzie Ostrom, best known for her work creating elaborate narratives involving perfume and other scents. The result of the collaboration was Ode, a small device that releases carefully formulated food fragrances before mealtimes—a sort of olfactory alarm clock to help pique the user’s appetite before food is placed in front of them by a caretaker. “Although people become disconnected with fragrance, the science is that one of the parts of the brain that remains functioning [with dementia] is the ability to process fragrance.” In early trials, Rodd saw elderly people that were typically withdrawn and agitated re-engaging in conversation, telling anecdotes related to their food memories. The smell of fish and chips could conjure a family trip to the seaside; one of the most successful fragrances was that of a cherry Bakewell tart, a traditional British teatime cake. Placed alongside placebo devices in private homes, care facilities and hospital wards, early Arduino prototypes of the device resulted in more than 50 percent of people in the initial research program gaining weight. As Ode was refined, Davies says the team aimed to create a pleasing yet humble industrial design. They avoided any LED indicator lights, which can agitate some dementia patients. “With socially inclusive design, if you can get it right for some extreme-use cases, then you’re really getting the simplest and most elegant solution,” he says. Davies urges designers to imagine their own desires decades from now as they undertake projects for the elderly: “Why would any designer set out to create a product for their future selves that is ugly and undignified and stigmatizing?”




The FoodJet offers customizable and scalable 3D food printing opportunities for potential use in elder care homes.

While a product like Ode can enrich the dining experience for those who have lost interest in eating, those who have lost the ability to swallow (a condition called dysphagia) are often completely alienated from the social and experiential aspects of food. When Netherlands-based designer Louise Knoppert learned that approximately 5,000 people in her home country are fed by feeding tubes alone, she began thinking about how to reunite this group with the dining experience. “I can’t imagine life without food and drink and missing out on all the social events that revolve around it,” Knoppert writes on her website. “I want to give these people something back…I want to invite them to the dinner table again.” Her work resulted in Proef, a box of nine slender wand-like implements used for creating new types of food experiences that allow users to take part in the flavors, sensations and actions of others at the dining table without having to swallow or chew. One tool, “Vapor,” uses an ultrasonic atomizer to create smoke from a flavorful liquid; another, “Dip,” allows the user to brush a small amount of pureed food on her lips or tongue.

Morphing food into new forms can help a whole new set of diners stay nourished and engaged with food. In Japan, home to the largest population of people over the age of 65, chefs are learning how to transform classic dishes into purees for those with dysphagia. Kaze no Oto, a restaurant in the suburb of Yokohama, serves older diners items like stir-fry from the standard menu pureed in a food processor for easy swallowing. In other Japanese kitchens and nursing homes, thickening powders and gels allow chefs to reshape purees into forms that more closely resemble familiar foods like filleted fish or chopped vegetables. Other countries are also addressing nutrition concerns among the elderly with new food innovations. In 2015, a project funded by the European Commission explored the use of 3D food printing technology—incorporating customized inputs for macronutrients, texture and density—to create meals for citizens with dysphagia. The resulting meals were a futuristic, albeit fairly appetizing, simulacrum of classic dishes like steak and gravy or fresh peas, and could become the basis of a larger prepared-food program in the future.

New convenience services and apps, too, are becoming crucial players in how older members of society enjoy food. Meal kit delivery companies like Blue Apron in the United States and Denmark’s Aarstiderne allow users to cook with fresh, seasonal ingredients at home even if they can’t drive themselves to the grocery store. Meal

TOP “Ice” wand from the Proef collection by Louise Knoppert.

MID. 3D printed “peas” from the 2015 Performance Project by the European Commission.

BOT. Proef, a collection of new dining tools for people who have difficulties eating and drinking.

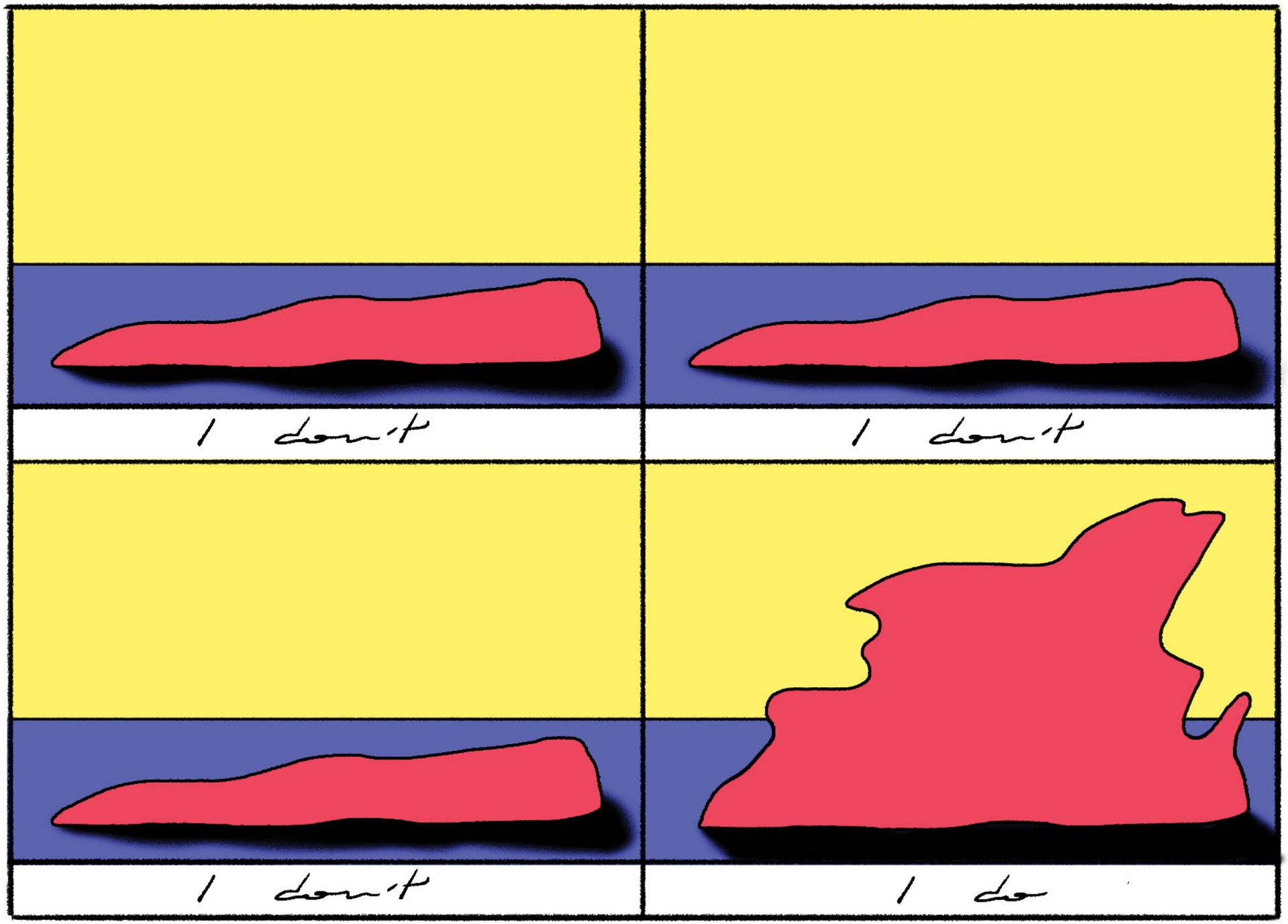
Train, a free service that allows users to sign up to prepare meals for a friend or neighbor, can often replace less personalized (and less social) options like Meals on Wheels programs for those in need of support. And as today's tech-savvy generations grow older, technology will become even more crucial to maintaining independence—imagine using an app like Be My Eyes to connect with a live guide who can help read a menu or food label to

A meal made from an agar base at a nursing home in Japan. Image by Kentaro Takahashi/The New York Times

3D printed meal from the Performance Project for elderly consumers on a dysphagia diet.

someone with a vision impairment, or a platform like Aira, which, with existing smart-glasses technology, could eventually deploy artificial intelligence to help users "see" virtually.

Ultimately, it is often when designers confront aging in their own lives that they begin to ponder how to make life better for those with diminishing abilities. When Sha Yao, a San Francisco-based product designer, learned of her grandmother's Alzheimer's diagnosis, she began to think about tools that would be useful as her grandmother lost the ability to care for herself. After a four-year design process that involved interviewing caregivers, volunteering in care facilities and hundreds of mock-ups, she created Eatwell, a nine-piece tableware set for people with cognitive and motor impairment. The set's high-contrast primary colors help users distinguish food from tableware and stimulate appetite, while specially curved spoons

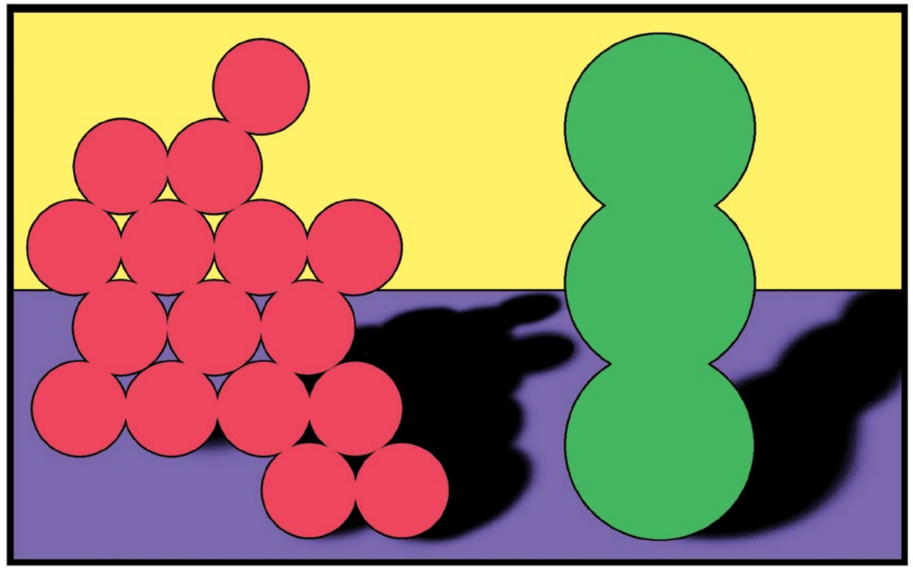


Louise Knoppert's collection of dining tools includes (from left to right) the "Sponge," a piece that absorbs liquids that can then be enjoyed by squeezing the implement in the mouth. "Foam" is shaken to create a foam on its textured surface.

and the slanted bottoms of deep dishes make it easier to scoop up food without it spilling over the edge. The set also comes with a cup and a mug, both with anti-tip designs. Still in development is a serving tray to increase the contrast between the set and the dining surface and allow users to attach an apron to catch falling food.

"Clients and caregivers told us that patients who have not been able to eat by themselves in years have been able to do it using the set," says Yao. One customer purchased the set for her sight-impaired mother, who normally felt too embarrassed to eat out at restaurants. The woman reported that now her mother, with a newfound confidence that she could eat without spilling food, was happy to dine out again. Yao's goal is to reduce the stigma associated with many assistive products by creating objects with broad appeal. "We try to make it more like an art piece for your house," she says. "Some people don't want to look like they need extra help, and we want to impress on people that [Eatwell] are not just for special use. We want to encourage the whole family to use this together."

Yao says she is seeing more and more designers enter the market of assistive products. "Each of them has a story that drives them to work hard on this and try to understand the community much more than other people," she says. "I truly believe there is a tremendous need in this field and I encourage young people to think through their experience and make a connection." Designers looking to make their mark on the world may not need to look further than their own families and neighbors for inspiration.



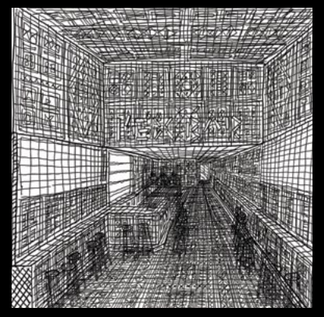
# CROSS BONES & A SLINGSHOT

## 20 YEARS OF FOOD DESIGN WITH MARTÍ GUIXÉ

TEXT
BY LINYEE YUAN

MARTÍ GUIXÉ IS OPENING A BAR.

Twenty years after he lobbed the explosive idea of designing food into a conservative industry defined by chairs and lamps, the Catalonian industrial designer is returning to the site of his most iconic project with another provocative concept that speculates on the future of design. Guixé's *L'Ex-Designer Project Bar* is a bar that doesn't sell drinks. In fact, from his perspective, the Bar doesn't even need to be open to customers for it to be viable. "You could see it on the Internet and look at the projects, but we have it open because we are from an old-school generation," he explains, wryly.



Guixé might joke about being "old-school," but his body of work over the last 20 years can be understood as a dogged, critical investigation of the potential future and limits of industrial design. His work has been so misunderstood, that in 2001, the designer began self-identifying as an "ex-designer" as a way to free himself from the expectations of the design community. "The idea was to do work in design in a different way," Guixé remembers. "An ex-designer comes from a design background but is not designing in the specific. Instead, you are designing more freely or because you like it—like an ex-tennis player who still plays tennis, but for fun and not for competition." Within today's context where the spectrum from UX, systems design, to synthetic biology, fall under the umbrella of design, this idea seems hardly revolutionary. But in 2001, product design removed from the grips of industry seemed almost unimaginable.

As an ex-designer, Guixé's projects examine the design process and its interplay between production and business. The products developed through this investigative process tend to be new typologies for familiar objects (with instructions for how to engage). My first encounter with Guixé's work embodies all these values—at the 2001 *Workspheres* exhibition at the Museum of Modern Art in New York, he presented a vending machine full of speculative pill-sized products. *HiBYE 7.0* enabled best practices like, "write everywhere," "carry nothing," "give memory gifts," and "consider everywhere indoor," for the nomadic worker.

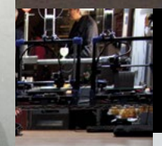
Guixé is widely credited with introducing the concept of food design to the world when, in 1997, he opened an exhibition of photographs from his project *SPAMT: Techo Tapas* with a largely unplanned bit of performance art. As he tells it, the gallerist was concerned that the public would ignore a design exhibition without design objects. The gallerist "insisted that I should prepare [one of the *SPAMT* concepts], this tomato with bread inside, but I don't like cooking." Guixé didn't want to do it so he asked four friends to come and help him prepare the snacks. Before they got too far, the gallerist interrupted the assembly line and told the motley crew that they had to assemble the edible objects in front of guests, as part of the opening. The response was swift and overwhelming.

Spanish newspapers and television covered the performance aggressively. "It was really radical because we were touching an icon, and there is a political layer," Guixé remembers. By redesigning *pa amb tomàquet*, the most representative dish of Catalonian cuisine, he touched a live wire of culture while testing the boundaries of design. In typical Guixé fashion, he joked, "a lot of magazines did great reports but with really bad critics." From this initial foray into the field of food design, Guixé began staking out the larger territory of ex-designer. The term subverts critics who tried to label his work as "art" by clearly embracing his role as a designer, but one that operates in a different context.

This context is established through a radical shift in thinking about the role of the designer. An ex-designer "proposes the 'business model' as a new artistic discipline,"

LEFT *L'Ex Designer Bar* sketch. The interior and all the objects for use in the bar will be 3D printed, including the food.

RIGHT 20 years of food design with Martí Guixé, ex-designer



the L'Ex Designer project website states. Early projects included 2005's *Food Facility*, where diners were invited to peruse the menus of local take-out restaurants, place an order with a "food advisor," and enjoy the delivered meal, plated and served in the ambiance of the prototype restaurant without a kitchen. Or 2004's interior commission for the Spanish fashion retailer Desigual where the designer took his budget, threw a private party and invited his friends to come and paint the space on the eve before the store opening. The *Project Bar* continues this line of inquiry by investigating what it might mean to remove the business of selling drinks from the concept of a bar. Instead, the bar becomes a beacon for people to gather. As Guixé explains, "that way, you have people you can organize and do things with." The bar as a "point of interest" has resulted in two years of programming ranging from concerts to "food sessions," and networking nights hosted by designers.

The idea for the *Project Bar* started from a plan to 3D print the tomato and bread *SPAMT*, a return to the beginning of his 20-year exploration of food as an industrial object. "In the '90s, I was very interested in mass production, and that's how I came to food," the designer told a crowd at Design Indaba. "Because food is a very mass-produced thing, but nobody sees it as an object." Set in the same gallery space where he introduced the world to the concept of food design 20 years ago, the *L'Ex Designer Project Bar* is also a return to Guixé's prodding interest in design as a tool for production.

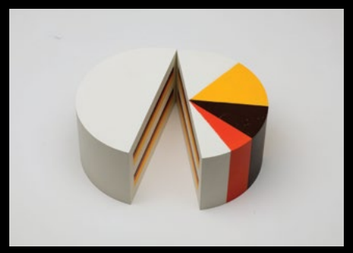
3D printing is a critical outlet for Guixé's exploration of production and process. The *Project Bar* is a work in process where everything is being 3D printed—the bar and all the barware including drinking glasses, plates and utensils. Uninterested in artisanal craft production, he sees design, "as a tool to simulate the process to mass produce a product." 3D printing technology enables microproduction and the introduction of unique elements, but products are still being produced with the aid of a machine and can be scalable. "Mass production, since five years [ago], is not manufactured for a human center, but for an economic purpose," Guixé warns. "Most things are not ecological or are not necessary. A philosopher in Barcelona compares industrialization with world war in terms of damages and the environment. Microproduction takes advantage of the knowledge of mass production."

The project kicked off in the empty gallery space on November 5, 2015, with an expected duration of two years from the first tile to the last 3D printed tomato. As of press time, the studio is still printing the bar with no specific timeline for when the performance might come to a close. In the meantime, visitors can stop in, purchase packs of the 3D printed drinking vessels, and even grab a drink.

Concerning food design, 3D printing offers an entirely new window into thinking about what and how we eat. Mass produced food in its current form is not healthy, the designer explains. 3D printing technology enables one to reimagine manufactured food, "as an architectural element with different vessels and with containers inside with structures. You don't need to go to the old process of cooking and molding. You can really build it," Guixé predicts.

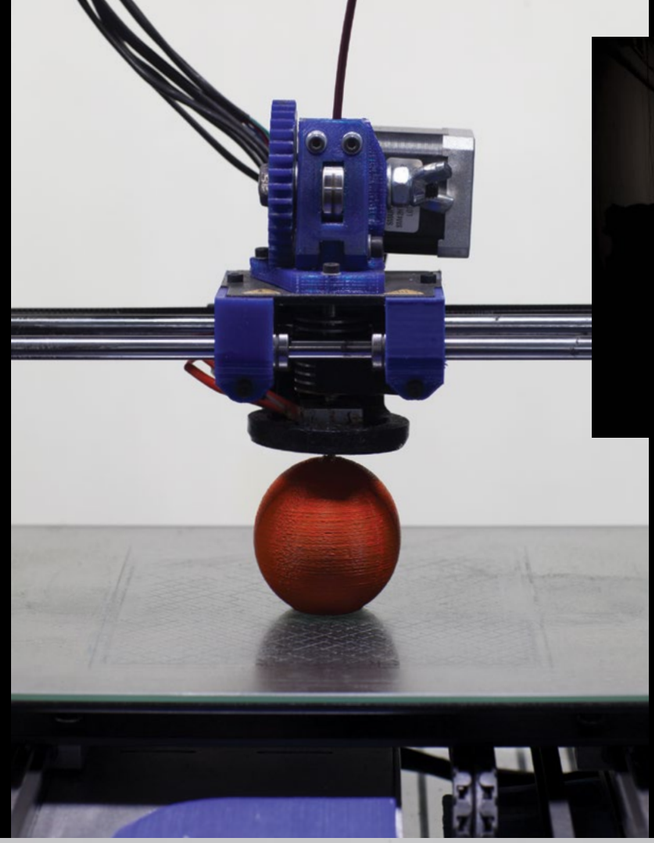
Although today's 3D food printing technology lags far behind Guixé's vision, his studio is experimenting with new typologies for future foods aided by the tools of microproduction. For this year's groundbreaking *Food Revolution 5.0* exhibition at the Museum für Kunst und Gewerbe Hamburg (MKG), Guixé introduced "Digital Food," a speculative project that is a fully customizable "feeding system" that produces foods configured along the inputs of nutrition, active principles, construction and gastronomy. "In a way, 'Digital Food' is an end of my process of 20 years," Guixé reflects. "But until 3D printing technologies are more advanced, we will not be able to advance this idea of design as I imagine it."

Until then, the designer is celebrating two decades of practice in the same way that he started it: with some humor, and surrounded by friends. The logo marking this anniversary is two crossbones and a slingshot inscribed with the words "design power." If his logo is any indication, 20 years of food design exploration doesn't mark an ending, but a new opening to sling a few rocks into the crowded field of design.



*All Images Courtesy of Inga Knölke*

LEFT I-Cakes, 2001. The pie graphic indicates the ingredients of the cake in percentages.



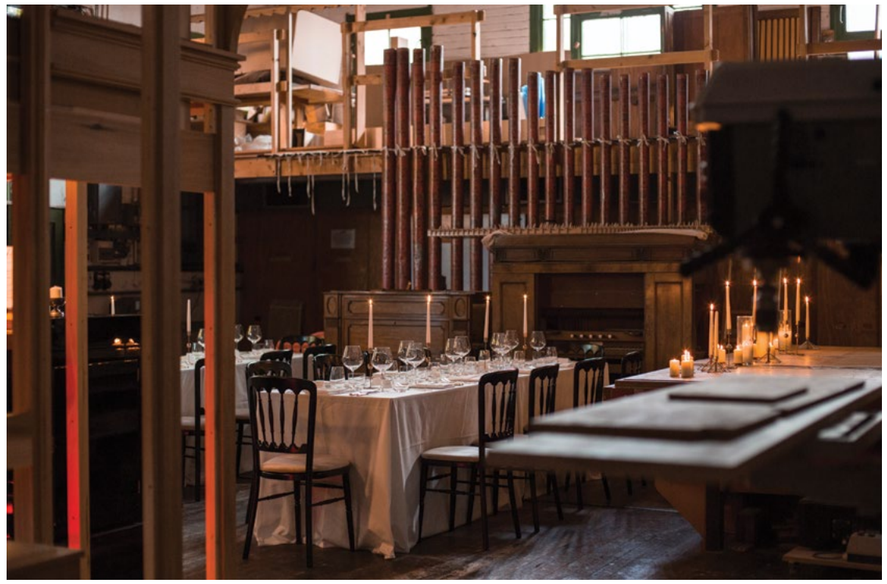
RIGHT Digital Food, 2017. A feeding system that produces 3D printed food.

# THE ACT OF FOOD

## Performance and Design at the Kitchen Table

Text by Nadine Botha
Art by Maren Karlson

LEFT From *Acting Things VI Spatial Canvas* by Judith Seng, 2017.
RIGHT *Act XXXIX*, Harvest, Peterborough. A table setting for 500 guests to coincide with the harvest moon. Courtesy of Studio Orta.



Bompas & Parr's Organs of London invited guests to feast on animal organs in the workshops of London's oldest pipe organ builder, Mander Organs. Photography by Jordan Stevens.

For those of us who loathe family reunions, we know all too well that meals are performances. The aunt's signature tart that is greeted with frozen smiles and then hidden in napkins for later disposal.

The grandiose display of masculinity that goes into tending the barbecue or carving the turkey; the same pre-scripted dialogue about who gets the thigh or the drumstick that is repeated year on year. Not to mention the loaded small-talk and passive aggressive "pass the peas" that keeps the darker family secrets beneath the table.

Yet it is these very rituals that codify behaviors, embed beliefs and ascribe identity—even for those with more amenable kin. Food and eating offer a gathering point for all manner of groups to come together, providing an opportunity for individuals to act out their relations to each other and society. Food and eating are by nature performative; even eating alone, or shoving down something while rushing between meetings, display who we are. Zooming out from the domestic to the global, the food system is also an enactment of geopolitics.

In the fledgling discipline of food design, performance has become a mainstay. Marije Vogelzang's iconic 2007 Christmas party for Droog draped the table with fabric sheets punched with holes for heads and hands, and one-ingredient plates that forced people to share. Not to mention any one of her interventions that blur the line between performer and audience by intimately engaging participants through techniques like being blindfolded and fed food and stories.

Relying on more traditional distinctions between performer and audience, Bompas & Parr have expounded food-inspired narratives through immersive banquets that evoke awe and exhilaration. These have ranged from performances of pipe organ music accompanied by eating cooked animal organs to their more recent *Sausage Séance*, entailing a banger-making masterclass that turned into a spirit-summoning workshop.

More and more, however, food and performance are being used outside of the realm of food design, by designers with more social concerns.

"The way we deal with food is as a ritual and gesture in the sense of social cohesion," says Hannes Bernard of SulSolSal, a collaboration between the South African designer and Brazilian architect Guido Giglio that explores the relationship between the West and the Global South.

The pair have used food and performance to explore topics ranging from the recession to biohacking and neo-survivalism. For instance, "The Banquet" was a food performance inspired by the economic crisis. It sought to create uncertainty by distributing unlabelled bottles of water and vodka, and evoke the need for people to support each other by only offering one-meter-long forks that obliged participants to feed each other.

"We are interested in economics, politics and cultural exchange," Bernard goes on. "Food is

Bompas & Parr's *Sausage Séance* combined a sausage-making workshop and feast with a supernatural experience using a meat-based Ouija board designed specially for the occasion.

not a subject, but an even more universal medium than a poster. Everyone has a relationship with food; it is cross-cultural and beyond language, and also a highly manipulative form of communication."

Artists Lucy and Jorge Orta, who have pioneered using food and performance to communicate design research since the 1990s, concur. Their ongoing series of *70x7 Meals* serve as a means to foster interaction in their participatory social practice. "Performance has also given more visibility as it allowed for a larger audience and public to witness and become involved in the projects, taking contemporary art out of the confines of the museum and into places where it wouldn't normally be or be seen," says Lucy Orta.

The capacity of performance to bring to life non-physical things, and food's knack to rally disparate groups around difficult topics, make the combination useful for communicating non-physical designs like systems, coding, interaction, experience, digital, speculative, critical and social design.

For instance, designer Margriet Craens' *70% Bar or Restaurant* creates an embodied experience of how accustomed we have become to over-consumption by only offering portions that are 30% smaller. The furniture and staff are also roughly 30% smaller or larger, creating a surreal scenography that underscores how problematic standardization is in social design.

Craens has also created a meal-performance centered on IBM's algorithmic cooking assistant, Chef Watson, and the culturally-bizarre but often surprisingly tasty food pairing it proposes. The idea here is to encourage reflection on the knee-jerk dismissal of artificial intelligence and machine learning.

Even while SulSolSal, the Ortas and Craens would never describe themselves as food designers, insisting that food is a medium for exploring other issues, all of these projects nonetheless highlight invisible social, cultural, political and environmental issues that problematize every bite of food. After all, an imminent global food crisis is not unimaginable with places like Venezuela, Yemen and Nigeria already heading towards famine, while drought continues to cripple much of Africa and the United Kingdom is sweating a Brexit-induced food shortage—not to mention the growing concerns around nuclear war.

If fresh food becomes a luxury, and we are finally forced to resort to Frankenfoods like algae soylent or protein made from carbon, the design question may be less about appearance than the social rituals. How will we endure family holidays without the panacea of satisfying food, or even encourage solidarity and reward success? Food's role in behavioral psychology and sociology is significant.

It is this matter of designing rituals that Judith Seng explores in her *Acting Things* series. Comprising six episodes, *Acting Things* uses various modes of performance and choreography to explore how the meaning and form of objects is produced through social and material interactions. For instance, the Japanese tea ceremony's ability to elevate everyday activities to the hallowed serves as inspiration for the sixth episode. Similarly, Seng turns drinking water into a ceremony using only hand gestures.

It is this ability of design to imbue matter and matters with meaning that will make gathering around a bowl of unfamiliar foods of the future not only tolerable, but also fulfill the social functions that eating serves. In other words, the inadvertent effect of these food performances could not only be a deeper relationship with and reflection on what we put in our mouths but finding new ways to connect and celebrate with each other. Let's raise the curtain on that.

Heart
MENU
ORGANS OF LONDON

MENU
ORGANS OF LONDON
Bone Marrow

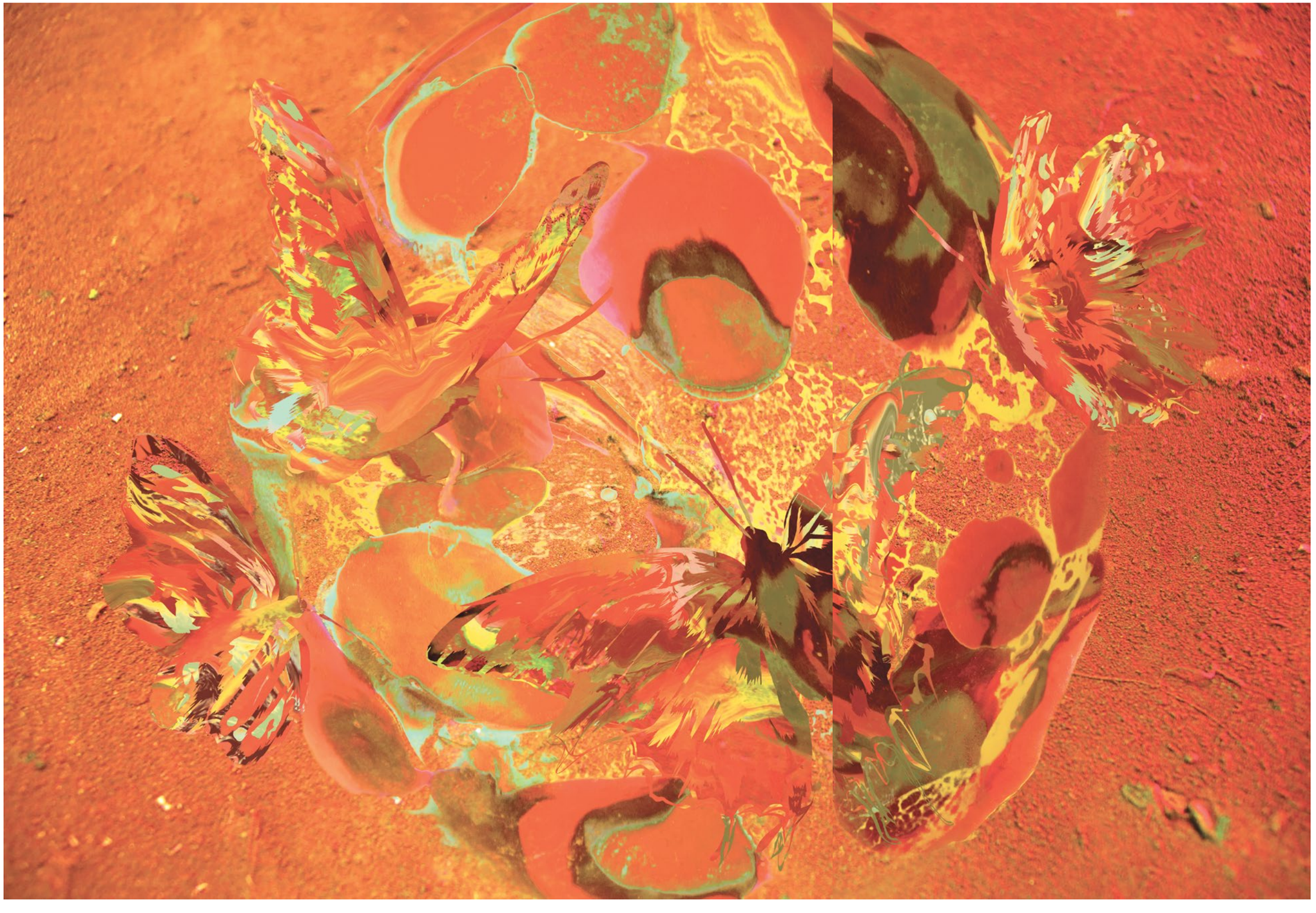
# TASTE LAB

CAPE MALAY LAMB CURRY, SERVES 6–8

DOWNLOAD TEMPLATE AT: bit.ly/MOLD-Mag-02-Template

TEXT BY HANNERIE VISSER

ART BY MEL NGUYEN



One might think that taste is only on the tip of the tongue, but a growing body of research in the fields of neuroscience and psychology points to a much more complex interplay of all the senses to produce flavor, that holy grail of food memory and meaning. In fact, eating is one of the few activities humans engage in (besides sex) that employs all of our senses—sight, taste, smell, sound and touch. Using learnings from the scientific research popularized by Dr. Charles Spence's collaborations with chef Heston Blumenthal at The Fat Duck, designers and researchers are creating experiences and products that experiment with multisensory flavor perception.

Below, Studio H, the South African multidisciplinary design studio headed up by Hannerie Visser, proposes a DIY experience you can recreate in the comfort of your own home. How does the flavor of food shift under the influence of color, light, music and material? Get crafty while you're cooking with some tunes, a heavy bowl, and these wavy food frames.

INGREDIENTS

1.5 kg lamb pieces
3 tablespoons oil
4 onions, peeled and chopped
2 carrots diced
4 garlic cloves, crushed
1 piece fresh ginger, peeled and crushed/grated
2 tablespoons cape malay curry powder (mild curry powder)
1 teaspoon ground dhania (coriander or cilantro powder)
1 teaspoon ground jeera (cumin seed)
1 teaspoon turmeric
4 cardamom pods
3 cinnamon sticks
3 cloves
2 bay leaves
salt and black pepper to taste

250 g dried apricots, soaked in warm water and drained
2 tablespoons tomato paste
50 ml white vinegar
250 ml stock
3 tablespoons natural yogurt

INSTRUCTIONS

Heat the oil in a large pot.

Over medium heat, fry the onions and carrots stirring continuously until soft and golden. Add the garlic, ginger, curry powder and all the spices and continue stirring.

Remove the onion and spice mixture and put to the side. Increase the heat slightly. Brown all the meat.

Reintroduce the onion and spice mixture.

Add the vinegar and stock, plus all the other remaining ingredients (except the yogurt). Cover.

Reduce the heat and simmer for approximately 2 hours or until the meat is tender, stirring occasionally.

Add the yogurt before serving and season with salt and pepper.

Serve with yellow rice and sambal.

Instead of the traditional achar, use sonic seasoning to add sweetness to the Cape Malay Lamb Curry. Listen to "Voices of Spring" by Pretty Yende. The high-pitched notes in the song will make your dish taste sweeter.

Add an extra kick to your meal. Using the template, add red or green cellophane lenses, and wear while eating your Cape Malay curry. Red light brings out the spicy notes in food. Green light makes food taste fresher, enhancing the flavors of foods like salad.

Get full, faster. Pull out a heavy rimless from your cabinet. Holding the bowl in your hand, eat from it without setting it back on the table. The weight of the bowl tricks your brain into feeling full more quickly.

Based on research by Professor Charles Spence, head of the Crossmodal Research Laboratory at the University of Oxford.